JULY 27, 2000

Feasibility of Mandatory Automated Export System (AES) Filing

Report to Congress

Presented To:

Senate: Committee On Foreign Relations
House: Committee on International Relations

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
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VII. APPENDIX

EXECUTIVE SUMMARY

This "Report to Congress—Feasibility of Mandatory Automated Export System (AES) Filing" responds to Congress' direction that the Secretary of Commerce, in consultation with the Secretary of State, the Secretary of Defense, the Secretary of the Treasury, the Secretary of Energy, and the Director of the Central Intelligence Agency provide a report on the advisability and feasibility of mandating electronic filing through the AES for all Shipper's Export Declarations (SEDs), and on the manner in which data gathered through the AES can most effectively be used, consistent with the need to ensure the confidentiality of business information, by other automated licensing systems administered by Federal agencies. The report also presents a proposed timetable and cost estimate for any expansion of information required to be filed through the AES.

Currently, export information is compiled from both paper and electronic documents or transactions filed by the export trade community with the U.S. Customs Service (Customs) or the U.S. Census Bureau (Census Bureau). All exports of merchandise valued over $2,500, from the United States, Puerto Rico, and the United States Virgin Islands, plus all licensed exports regardless of value, are required to be reported. For exports to Canada, the United States substitutes Canadian import statistics, rather than collect statistics on exports to Canada, in accordance with a data exchange arrangement codified in a Memorandum of Understanding (MOU) signed by the customs services and statistical agencies in both countries.

To improve the quality of export trade statistics, to reduce reporting burden on American exporters, and to ensure compliance with export laws, the Census Bureau and Customs, in 1994, initiated the AES program. The AES is an electronic method by which exporters or their agents can transmit SED information and by which carriers can transmit transportation (manifest) information to the Customs Service or the Census Bureau. The AES became operational in July 1995. Currently it is a strictly voluntary program. Use of the AES by American exporters and forwarding agents increased slowly in its early years, in part because exporters could still make use of an alternative but antiquated computerized reporting system, the Census Bureau's Automated Export Reporting Program (AERP). This twenty year old system was shut down at the end of 1999, and since then the number of exporters using the AES and the value of export transactions reported over the AES has grown rapidly.

Notwithstanding the increasing use of the AES, it is clear that inadequacies still exist in the export data collected by the Federal government. These inadequacies reduce the quality of export statistics, impose unnecessary costs on business, the trade community and the government, and most importantly compromise the Nation's ability to control the export, to hostile countries or parties overseas, of critical technologies, illegal goods, or commodities that could become weapons of mass destruction.

Making mandatory the reporting through the AES of all export shipments is judged to be a tangible and feasible step toward correcting these inadequacies. To ensure that the AES is capable of implementing the requirements of the Proliferation Prevention Enhancement Act of 1999, to include the mandatory filing of all SED information through the AES, and to integrate the AES with other Federal agency licensing systems, in the proposed time frame, a significant increase in funding for both the Census Bureau and Customs will be required. In order to implement this system, the Census Bureau and Customs will need to dedicate $6.7 million, and $19.6 million respectively, out of their operating dollars for each fiscal year, 2002 through 2005.

Accordingly, all the agencies contributing to this report agree that reporting all export information through the AES should be made mandatory. Of most relevance to the aims of the legislation mandating this feasibility study, mandatory use of the AES will, in the view of the agencies consulted, increase the likelihood that goods exported from the United States meet the government's licensing requirements, thereby reducing the possibility that weapons of mass destruction and critical technology will be exported illegally. Also, the consulting agencies would like access to AES data for their specific licensing or export control purposes. Given that data filed through the AES are transaction specific, access to the AES data will necessarily be dependent on each agency's statutory and regulatory authority to have access to such specific export data.

I. BACKGROUND

On November 29, 1999, the President signed H.R. 3194, the Consolidated Appropriations Act of 1999. Subtitle E of the Act contains the "Proliferation Prevention Enhancement Act of 1999." This Act amends Title 13, United States Code, Section 301 by adding at the end the following new subsection: "(h) The Secretary [Commerce] is authorized to require by regulation the filing of Shipper's Export Declarations under this chapter through an automated and electronic system for the filing of export information established by the Department of the Treasury."

In general this Act authorizes the Secretary of Commerce, with the concurrence of the Secretary of the Treasury, to publish regulations in the *Federal Register* to require that, upon the effective date of those regulations, exporters (or their agents) who are required to file Shipper's Export Declarations under Chapter 9, Title 13, United States Code, file such declarations through the Automated Export System (AES) with respect to export of items on the United States Munitions List or the Commerce Control List.

The regulations referred to in the previous paragraph will include at a minimum: (1) a provision by the Department of Commerce for the establishment of online assistance services to be available for individuals who must use the AES, (2) a provision by the Department of Commerce for ensuring that an individual who is required to use the AES is able to print out a validated record of the transaction, including the date of the submission and a serial number or other unique identifier for the export transaction, and (3) a requirement that the Department of Commerce print out and maintain on file a paper copy or other acceptable back up of the individual's submission selected by the Secretary of Commerce.

The Act will become effective **270** days after the Secretary of Commerce, the Secretary of the Treasury, and the Director of the National Institute of Standards and Technology jointly provide a certification to the **Committee on Foreign Relations of the Senate and the Committee on International Relations of the House of Representatives** that a secure AES system available through the Internet that is capable of handling the expected volume of information required to be filed under subsection (b), plus the anticipated volume from voluntary use of the AES has been successfully implemented and tested and is fully functional with respect to reporting all items on the Commerce Control List and the United States Munitions list, including their quantities and destinations.

The U.S. Census Bureau, Department of Commerce coordinated the establishment of an AES Certification Working Group to prepare this certification report for submission to the appropriate committees of Congress. Representatives of the Census Bureau, the Department of Commerce, the Department of the Treasury, the U.S. Customs Service, and the National Institute of Standards and Technology are all represented on this working group and are taking the necessary steps to complete the certification process, and present the appropriate report to Congress.

This Act also specifies that a **Feasibility Report** be submitted to the above listed committees of Congress not later than **180** days after enactment of the act, i.e., May 29, 2000. This report must set forth:

(1) The advisability and feasibility of mandating the electronic filing through the AES for all shipper's export declarations;

(2) The manner in which data gathered through the AES can most effectively be used, consistent with the need to ensure the confidentiality of business information, by other automated licensing systems administered by federal agencies including the:

  (A) **Defense Trade Application System** of the Department of State;
  (B) **Export Control Automated Support System** of the Department of Commerce;
  (C) **Foreign Disclosure and Technology Information System** of the Department of Defense;
  (D) **Proliferation Information Network System** of the Department of Energy;
  (E) **Enforcement Communication System** of the Department of the Treasury; and
  (F) **Export Control System** of the Central Intelligence Agency; and

(3) A proposed timetable for any expansion of information required to be filed through the AES.

The Census Bureau also coordinated the establishment of an AES Feasibility Working Group, comprised of the six federal agencies listed above, to conduct this analysis, address the objectives of the legislation, and prepare a Feasibility Report for submission to the appropriate committees of Congress. Consistent with the Act, the major objectives of the report are to evaluate the

feasibility of mandating AES for filing all export declarations, to investigate the manner in which the AES can or cannot be used by the automated export licensing systems listed above, to develop a timetable for any expansion of information (if any) to be filed through the AES, and to present the estimated cost for full implementation of such a system.

The Feasibility Report presented to Congress, herein, describes our findings and the specific recommendations the participating agencies are proposing: (1) to make AES filing mandatory for the filing of all Shipper's Export Declaration information, (2) to integrate the data gathered through the AES with the specific export licensing systems listed above, and (3) to develop a proposed timetable and cost estimate for expanding the use of the AES for the mandatory filing of all export declarations and integrating the AES with the other licensing systems.

II. OVERVIEW OF AGENCY FILING AND LICENSING REQUIREMENTS

A. Licensing System Overview
   Treasury Enforcement Communications System (TECS)
   Department of the Treasury

The Treasury Enforcement Communications System (TECS) links more than 24,000 computer terminals located at air, land, and seaports of entry. In addition to the U.S. Customs Service (Customs) and the Immigration and Naturalization Service (INS), law enforcement and regulatory personnel from over 20 other Federal agencies or bureaus use the TECS. Some of these agencies are the Federal Bureau of Investigation (FBI), Interpol, the Drug Enforcement Administration (DEA), the Bureau of Alcohol, Tobacco, and Firearms (ATF), the Internal Revenue Service (IRS), the United States Coast Guard, the Federal Aviation Administration (FAA), the United States Secret Service, and the Animal Plant Health Inspection Service. Also, information gathered from the TECS is shared with the Department of State for use by Consular Officers at U.S. Embassies and Consulates.

The TECS provides the law enforcement community with access to computer-based enforcement files of common interest. The TECS keeps track of information on suspect individuals, businesses, vehicles, aircraft, and vessels. The information is used to assist law enforcement and regulatory personnel. The TECS does not maintain any licensing information for other government agencies. Licenses issued or administered by other agencies are tracked by those individual agencies.

The Outbound Target and Tracking System (OTTS) is an automated system in the TECS that is designed to keep track of outbound cargo examination results, research information, and the subjects (people and businesses) associated with the examination results and the research information. Outbound cargo examinations not recorded in the AES require input into the OTTS.

Currently, there is no direct interchange of information between the OTTS and the AES. User requirements need to be drafted to begin the process of developing a module within the AES to record the examinations of non-AES shipments. When completed, this will centralize all outbound cargo examination information in the AES.

Importers and exporters of precursor and essential chemicals, must by DEA Regulations, report each transaction by filing a DEA Form 486: Import/Export Declaration. The information for each Form 486 is inputted by DEA personnel and downloaded into the TECS. For outbound shipments, the paper Form 486 declaration is

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reported when the carriers manifest is submitted to the U.S. Customs Service (Customs). The declaration is processed in the TECS by Customs officers by matching the paper declaration with the automated record. If an outbound examination is performed, the examining officer records the inspection results in the TECS. A meeting was held in 1995 to discuss the export control requirements and discuss regulatory changes needed to update, and perhaps automate the process of integrating the Precursor Chemicals (Form 486), and Controlled Substances (Form 236), into the AES. It was determined that a license interface with the AES was not feasible at that time because of other system and enforcement priorities at both the DEA and Customs. However, the current goal is to implement a Memorandum of Understanding (MOU) with the DEA and interface the Forms 486 and 236 with the AES.

As stated above, the TECS does not maintain any licensing information for other government agencies. Licenses issued or administered by other agencies are tracked by those individual agencies. The ultimate goal of the TECS is to eliminate the trade community's and Customs' manual processing and paper review of the Shipper's Export Declaration (SED)/approved license data, and replace it with online data to view for verification purposes. This will result in more efficient and faster handling of export shipments at the ports. (See Appendix A-1 for additional information.)

B. Filing System Requirements
   Shipper's Export Declaration/Automated Export System
   U.S. Census Bureau
   Foreign Trade Division

The U.S. Census Bureau has the primary responsibility for the collection, compilation, and publication of official statistics on U.S. exports and imports, a principal economic indicator. The Shipper's Export Declaration (SED), Forms 7525-V, 7525-V-Alternate (Intermodal), and their electronic equivalents, that are filed over the Automated Export System (AES), are the basis for collecting the official export trade statistics compiled by the Census Bureau. Title 13, United States Code, Chapter 9, Sections 301-307, authorizes the collection of all these data. Title 15, Code of Federal Regulations, Part 30 contains the regulatory provisions for preparing and filing the SED or the AES record. These data are essential in formulating basic government policy decisions affecting the economy. U.S. businesses rely heavily on these data to develop export leads and export marketing strategies, and in assessing the impact of exports on the domestic economy.

U.S. export statistics are currently compiled from various paper and electronic sources of export transactions filed by the trade community. Until recent years, the majority of these transactions were collected manually on the paper SED form. The Census Bureau in conjunction with the U.S. Customs Service (Customs) developed the AES as an electronic information gateway for businesses to file export data electronically to replace the paper SED. The AES is an electronic method by which exporters or their agents can transmit commodity (SED) information, and carriers can transmit transportation (outbound manifest information). This system has been in operation since 1995 and has recently seen dramatic growth.

The SED and AES records are also used for export control purposes under Title 50, United States Code, and are used to detect and prevent the export of certain commodities (for example, high technology or military goods) to unauthorized destinations or end users. The SED and AES records, as the official documents of export transactions, enable Customs and the Bureau of Export Administration (BXA) to enforce the Customs' and Export Administration Regulations, and thereby, detect and prevent the export of high technology commodities to unauthorized destinations. The Department of State also uses the SED and AES information to enforce the International Traffic in Arms Regulations (ITAR), to detect and prevent the export of arms and ammunition to unauthorized destinations.

Below is a summary of the other Federal agency regulations that exporters and their agents must adhere to when preparing the SED or filing the information electronically using the AES. Licensing information from these agencies must be reported on the SED. The primary licensing regulations are contained in the:

(a) Export Administration Regulations (EAR), published by the BXA (15 CFR Parts 730-774);
(b) International Traffic in Arms Regulations (ITAR), published by the Department of State(22 CFR Parts 120-130);
(c) Office of Foreign Assets Control Regulations (OFAC), published by the Department of Treasury (31 CFR Parts 500-597);
(d) Drug Enforcement Administration (DEA) export regulations (21 CFR Part 1313) and;
(e) 0ther applicable Federal agency export or trade regulations.

A paper SED or the electronic AES record is required for all exports of merchandise valued over $2,500 from the United States, Puerto Rico and the United States Virgin Islands. The SED or AES record is also required for all licensed exports (i.e., State

Department or Bureau of Export Administration licenses)
regardless of value. Exports to Canada are handled under a
separate data collection system. For exports to Canada, the
United States is substituting Canadian import statistics for U.S.
exports to Canada in accordance with a Memorandum of
Understanding (MOU) signed by both Customs and statistical
agencies in both countries. Similarly, under this MOU, Canada is
substituting U.S. import statistics for Canadian exports to the
United States. However, for exports to Canada that require a
license, a SED or AES record must be filed. Also, a SED or AES
record must be filed for exports from the United States
transhipped through Canada destined to a country other than
Canada.

All United States exporters selling merchandise for export are
required to file specific export documentation with Customs at
the port of export. This includes the SED and the outbound
manifest. If the information is filed electronically using the
AES, an exemption statement is included on the manifest
indicating that no SED is attached, with a transaction
identification number to identify the shipment. The SED or AES
record must be filed by exporters or their agents for all
commodities shipped out of the United States to foreign
countries, except as specifically exempted, according to the
specifications contained in the Foreign Trade Statistics
Regulations (FTSR). A shipment is all merchandise being sent
from one exporter to one consignee to a single country of
destination, on the same carrier, on the same day. The filing
requirements, as specified in the FTSR, pertain to all export
information filed, whether the information is filed on the paper
SED or electronically using the AES.

For mail shipments, SEDs must be presented to the United States
Postmaster at the time of mailing, or with the exporting carrier
prior to exportation. The Postmaster will mail the original copy
of the SED to the Census Bureau. It is the duty of the exporter
or the exporter's agent to deliver the required number of copies
of the SED and the manifest to the exporting carrier prior to
exportation. The exporting carrier must submit the SED and
manifest information to the Customs Director at the port of
export prior to departure (or within 4 days after departure if a
bond is posted with Customs). Carriers transporting merchandise
for export will not be granted clearance to depart until
manifests and SEDs have been filed with the Customs Director at
the port of export. The Customs Director, at the port of export,
will mail the original copy of the SED to the Census Bureau. The
Customs Director, at the port of export can also verify the AES
shipment prior to departure.

More detailed filing requirements for transmitting the AES
information are contained in the AES regulations and in the AES
and AES*Direct* overview sections of this report. Detailed
requirements for filing export data electronically using the AES
are contained in the FTSR, 15 CFR Part 30, Subpart E—Electronic
Filing Requirements—Shipper's Export Information, and in the AES
Trade Interface Requirements (AESTIR) (See Appendix A-2 for
additional information.)

C.   Licensing System Overview
       Export Control Automated Support System (ECASS)
       Bureau of Export Administration (BXA)
       Department of Commerce

The Bureau of Export Administration (BXA) promotes the national
and economic security and foreign policy interests of the United
States by managing and enforcing the department's security-
related trade and competitiveness programs. The end of the Cold
War has had a dramatic impact on BXA, and the Bureau's major
challenge now is to minimize the potential for proliferation of
weapons of mass destruction. The processing and analyzing of
export license applications is at the core of BXA's mission.
Only 2 percent of US exports require licenses, but these
represent "choke-point technologies" for dangerous or dual-use
commodities that could become weapons of mass destruction.

The BXA operations have been supported for the past 15 years by
the Export Control Automated Support System (ECASS), which is
hosted on an IBM mainframe utilizing the Model 204 DBMS. This
system streamlines the processing of an export license
application from initial receipt in BXA, interagency review and a
final decision, including escalation to the Operating Committee,
Advisory Committee on Export Policy, Export Administration Review
Board, and, potentially, the President of the United States. The
process is designed to render decisions about export license
applications that are consistent with statutes, regulations, and
Presidential directives. This process was dramatically impacted
by the promulgation of Executive Order 12981 in December 1995,
that expanded interagency referrals, extended the interagency
referral period from 20 to 30 days, but shortened the overall
processing time from 120 to 90 days. The ECASS system also has
the capability of processing commodity classifications, license
determinations, and commodity jurisdictions.

There are several major subsystems, that comprise the ECASS system. Export Administration uses the Licensing Officer Access (LOA) System to review, refer, and validate license applications for exports and re-exports of controlled dual-use commodities. Export Enforcement uses the ENFORCE system to engage in the process of identifying, investigating, and prosecuting those who have exported goods illegally. The exporting community can submit applications electronically utilizing either the Electronic License Application Information Network (ELAIN) or via the World Wide Web, utilizing the Simplified Network Application Processing (SNAP) system. Exporters can obtain information about the status of their license application by using the System for Tracking Export License Applications (STELA), a voice response unit that interactively queries the licensing database using the application control number. (See Appendix A-3 for additional information.)

D. Licensing System Overview
    Defense Trade Application System
    Office of Defense Trade Controls (DTC)
    Department of State

Responsibility for the Defense Trade Application System resides in the Office of Defense Trade Controls (DTC). The DTC provides foreign policy advice to U.S. persons involved in the manufacture, export, temporary import, and brokering of defense articles and defense services. The DTC administers the International Traffic in Arms Regulations (ITAR), which includes the United States Munitions List (USML). The ITAR specifies the requirements and procedures that persons subject to U.S. jurisdiction must follow in brokering or furnishing defense articles or defense services abroad. Pursuant to the Arms Export Control Act (ACEA) and the ITAR, it is unlawful to export any defense article (including technical data) or furnish any defense service without first obtaining from DTC the required munitions license or other authorization.

Legal authority for the export control functions administered by the DTC is derived from the Foreign Assistance Act (FAA), Arms Export Control Act (AECA), related legislation (annual Foreign Relations and Defense Appropriations and Authorization Acts), and Executive Order 11958. The Office of Defense Trade Controls (DTC) is located within the Bureau of Political Military Affairs, Department of State. At the start of FY 1999, DTC had 36 full time State Department employees; four military officers detailed from the military departments; a senior U.S. Customs Service special agent providing law enforcement liaison; and 15 contract employees.

In the most recent fiscal year, the DTC reviewed more than 44,000 licenses or other requests to export or temporarily import defense articles or defense services. The value of authorizations provided to the U.S. defense industry on an annual basis remained relatively constant at around $26 billion. As in previous years, defense trade authorized by the DTC continued to be overwhelmingly concentrated with a small number of U.S. friends and allies (e.g., about 85 percent of total authorizations were for the North Atlantic Treaty Organization (NATO), other Western European armed forces [such as Sweden and Finland], Japan, Australia, Taiwan, South Korea, Israel, Egypt and Gulf Cooperation Council (GCC) states [such as Saudi Arabia, Bahrain, Kuwait, and the United Arab Emirates.]

More than 40 percent of all new munitions license applications are submitted electronically through the DTC's electronic licensing system. DTC maintains a database of over 10,000 registrants (about 4,000 of which are active exporters); there were nearly 450 new registrations in FY 1998 and approximately 1,100 amendments to existing registrations.

There were 418 Blue Lantern cases (these are cases in which the DTC checks with U.S. embassies in foreign countries on the validity of a specific foreign ultimate consignee or end user on a license), initiated in FY 1998 (70 percent pre-license). Seven percent were unfavorable; 98 cases are still in progress. Negative information is shared with law enforcement and other regulatory agencies.

The DTC and the United States Customs Service (Customs) cooperate closely in ensuring enforcement of the AECA and the ITAR, at U.S. ports of exit. More than $53 million in United States Munitions List (USML) equipment was seized by Customs during FY 1998, representing 76 percent of all controlled trade (i.e., ITAR, EAR, OFAC) seized in U.S. ports of exit. Eighty-five percent of all seizures, resulting from detentions by Customs referred to the Exodus Command Center resulted from USML determinations made by the DTC. The Customs Exodus Command Center is the primary liaison between Customs field offices and all export regulatory agencies. It is primarily an emergency conflict resolution office to resolve questions concerning the export of licensed merchandise. During the past 2 years there have been 127 criminal convictions under the AECA and 2 acquittals. DTC personnel frequently serve as expert government witnesses during criminal trials.

Various provisions of the FAA and the AECA provide for broad
oversight by Congress. Section 655 of the FAA provides for an
annual report detailing all authorizations by country, dollar
value, and quantity. Section 36 of the AECA provides for a
quarterly report to Congress of, <u>inter alia</u>, all authorizations
by country and dollar value; all sales of $1 million or more of
major defense equipment; and all political fees, commissions, and
contributions reported to the DTC in connection with arms sales.
Section 36 also provides for prior notification to Congress of
all major sales ($14 million for major defense equipment; $50
million in other defense articles/defense services and all
manufacturing agreements abroad involving significant military
equipment. There were about 150 such cases reviewed by Congress
in FY 1998, representing one-third of the total dollar value of
all authorizations. Section 38 of the AECA requires notification
to Congress prior to any item being removed from the United
States Munitions List.

Arms transfers to more than two dozens countries were embargoed
in FY 1998, as a result of U.S. law and policy and United Nations
Security Council (UNSC) decisions. Several dozen other countries
are subject to special scrutiny, due to nonproliferation,
regional security (e.g., disputed territories or borders), or
human rights concerns. (See Appendix A-4 for additional
information.)

E. Licensing System Overview
    Proliferation Information Network System (PINS)
    Department of Energy

The precursor to the Department of Energy's (DOE) Proliferation
Information Network System (PINS) was first established in the
late 1970s to support DOE statutory licensing responsibilities
under Section 57b of the Atomic Energy Act of 1954, as amended,
the Nuclear Nonproliferation Act of 1978, and the Export
Administration Act of 1979, as amended. Additional DOE export
control responsibilities are derived from U.S. regulations and
international treaties and agreements. Since the late 1970s PINS
has evolved into a state-of-the-art information sharing system,
providing support for all aspects of the DOE's export licensing
responsibilities.

The PINS is supported by the DOE's Office of Arms Control and
Nonproliferation, Nuclear Transfer and Supplier Policy Division
(DOE/NN-43). It is a classified system, running at the
secret/restricted data level, connecting DOE/NN-43 and seven of
DOE's technical laboratories (Argonne National Laboratory,
Livermore National Laboratory, Los Alamos National Laboratory,

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Oak Ridge/Lockheed Martin Energy Systems, Pacific Northwest
National Laboratory, Sandia National Laboratory, and Savannah
River Site)that assist DOE with end use and end user analyses.

The PINS consists of the Export Information System (EIS), data
products, and e-mail. EIS is a comprehensive database system
used by DOE and its laboratories to review nuclear related dual-
use license applications, also referred to as cases received from
the Department of Commerce (DOC), as well as munitions license
applications received from the Department of State (DOS).
License applications from DOC's Bureau of Export Administration
are downloaded electronically on a daily basis from the Export
Control Automated Support System (ECASS), while munitions cases
are received through hardcopy routes from the DOS and entered
into PINS manually.

When license applications are updated into the PINS, DOE analysts
electronically refer the applications to the different
laboratories for technical and end user reviews. After the
laboratories' analyses are completed, the DOE analyst will make a
recommendation to deny, approve, or approve with conditions.
Once the supervisor approves the recommendation, the unclassified
recommendation and any conditions are extracted from the PINS and
electronically sent to ECASS. The process for munitions cases is
similar, except a hardcopy recommendation is sent back to the
DOS. Supplemental license material received from the DOC and the
DOS are scanned into the PINS and electronically attached to the
cases, so a complete record of the case will always be available.
The data products in the PINS provide up-to-date reference
materials, available for full-text searching. Also included as
part of the data products are the State Department's message
cables.

Besides being a case review processing system, the PINS allows
analysts to perform trend analysis. A missing part of the
analysis, though, is data from Shippers' Export Declarations.
Currently, the DOE has no way of knowing whether a commodity was
actually exported or not. The shipping data are critical to help
DOE analysts obtain a more complete analytical basis for its
review. (See Appendix A-5 for additional information.)

F. Licensing System Overview
   Foreign Disclosure and Technology Information System (FORDTIS)
   Office of the Undersecretary of Defense for Policy OUSD (P)
   Policy Automation
   Department of Defense (DoD)

The Office of Policy Automation provides mission essential and office automation support for over 1,300 classified and 1,500 unclassified Policy users. The primary network is the Security Policy Automation Network (SPAN), that operates in a secret high environment with ties to the Secret Internet Protocol Network (SIPRNET) within DoD. The SPAN an is a wide area network that supports communication and coordination among DOD activities dealing with National Disclosure Policy (NDP-1), Technology Transfer (DoD 2040.2), Foreign Disclosure (DoD 5230.11), International Visits (DoD 5230.20), and International Agreements (DoD 5530.3). Statutory authority is derived from the Export Administration Act of 1979, Section 10(g), as amended (PL 96-72, 93 Stat. 503, 50 USC app. §§ 2401- 2420), the International Emergency Economic Powers Act, as amended (PL 95-223, 91 Stat. 1628, 50 USC app. §§ 1701 – 1706), the Arms Export Control Act, Section 38 (90 Stat. 744, 22 USC 2778, 22 USC 2778(a) and 22 USC 2794(7)), and the National Defense Authorization Act of 2000, Section 1402(a) & (d) (PL 106-65, 113 Stat. 797).

The classified portion of SPAN supports over 500 workstations at over 120 organization locations throughout the Office of the Secretary of Defense, the Joint Chiefs of Staff, the military departments, and selected U.S. government organizations external to DoD. The unclassified portion of the network supports approximately 60 sites at foreign embassies in Washington DC, and additional sites throughout the U.S. defense industry and embassies overseas.

The primary application on SPAN is the Foreign Disclosure and Technical Information System (FORDTIS). Functions supported within FORDTIS include foreign visits, technology transfer, international security agreements, and release of classified and technical data. To accomplish these functions, workflow management and decision support systems are built into the applications. The system contains numerous analytical tools to include the Cleared Facilities List, International Agreements database, Military Critical Technologies List, Commodity Control List, etc.

FORDTIS is currently undergoing technology refreshment and various capability enhancements to include a new Technology Protection System (TPS). A portion of the improvements is part

of the new $30 million, 3 year, Interagency Export License
Control improvement program called USXPORTS. The TPS and
USXPORTS applications will eventually replace FORDTIS and improve
the quality of the reviews that protect military capabilities and
standardize data between government agencies, while accelerating
the license process to meet global marketplace demands. It is
anticipated that access to the AES would enhance the export
control capability of the FORDTIS and eventually the TPS and
USXPORTS applications. (See Appendix A-6 for additional
information).

G. Licensing System Overview
    Export Control System
    Director of Central Intelligence (DCI)
    Nonproliferation Center (NPC)
    Central Intelligence Agency

The Nonproliferation Center (NPC) under the guidance of the
Director of Central Intelligence (DCI), manages the critical role
of U.S. intelligence in supporting the formulation and
implementation of U.S. nonproliferation policy. It serves as the
U.S. Intelligence Center of Excellence and lead office for all-
source analysis on proliferation and nonproliferation issues. As
directed by the DCI, and in consultation with other components as
appropriate, NPC manages the development and facilitates the
implementation of a U.S. intelligence strategy for supporting
nonproliferation efforts, including support to DoD counter
proliferation activities. It oversees integrated national
intelligence support to counter proliferation efforts,
counterintelligence, the military, and special and clandestine
operations, including nonproliferation support to law
enforcement. The NPC also develops integrated, analytic, and
collection strategies; provides guidance; and establishes
priorities for U.S. intelligence, based on consumer needs to
increase knowledge and understanding of the proliferation of
weapons of mass destruction (WMD) and their delivery systems.

The NPC evaluates U.S. intelligence performance, as required by
the DCI and the Congress, in supporting U.S. nonproliferation
policy objectives and meeting customer needs. In consultation
with the Community Management Staff, the DCI also recommends
investment changes or develops options to optimize U.S.
intelligence performance. It identifies shortfalls, develops
strategies, and provides guidance and priorities to U.S.
intelligence research and development efforts to improve
intelligence collection and analytic capabilities related to
proliferation and nonproliferation. The NPC provides Congress,

as appropriate, with intelligence assessments on all aspects of proliferation and nonproliferation, and related U.S. intelligence capabilities. It maintains effective partnerships on issues of common concern with other U.S. intelligence issue managers and organizations. Finally, (on all aspects of nonproliferation issues), the NPC develops and implements plans for facilitating the scientific and technical relationships of U.S. intelligence with outside entities, including private industry, academia, the national laboratories, and the public health community.

The Interdiction Analysis Group (IAG) within the NPC provides support and analysis of weapons of mass destruction related interdiction efforts by the U.S. policy, military, law enforcement, and operational intelligence communities. The IAG analyzes the commercial, financial, and logistical capabilities that enable key countries and criminal elements to acquire weapons of mass destruction and the technology, materials, and expertise needed to develop them. The focus is on understanding the global networks of supplier organizations, government entities, and intermediaries associated with the transfer of weapons of mass destruction (WMD) related and dual-use technologies and materials. The IAG also supports the export licensing processes of the Department of Commerce for dual-use commodities and the Department of State for munitions.

The License and Export Team (LET) within the IAG provides relevant intelligence information that is available within the Agency on the end users and intermediaries identified in export license applications. The LET also provides additional support to the licensing process, by preparing finished intelligence reports and briefings on the results of its analytic efforts and through the participation of certain of its licensing analysts in the deliberations of the licensing advisory groups. (See Appendix A-7 for additional information.)

III.A   AUTOMATED EXPORT SYSTEM (AES) OVERVIEW

In January 1994, the U.S. Census Bureau (Census Bureau), the U.S. Customs Service (Customs), other Federal agencies and the exporting community began developing the Automated Export System (AES). The Census Bureau and Customs, as the primary developers of the AES, created the AES to assist in the enforcement of export control laws, improve the collection of export trade statistics, and facilitate export trade. The AES was designed to electronically capture Census Bureau Shipper's Export Declaration (SED) information and Customs Carrier Outbound Manifest data, and to be the single source for the submission of export data. Currently, the AES accepts commodity data reported on the SED for all methods of transportation and transportation data reported on the Vessel Outbound Manifest for vessel shipments.

The AES is an information gateway for both the Census Bureau and Customs, to improve the reporting of export trade statistics, improve customer service, assure compliance with and enforcement of export laws and provide paperless reporting of export information. In meeting the needs of both the Census Bureau, Customs, and the other Federal agencies involved in export control, the AES provides detailed real-time export information that systematically identifies high risk shipments for examination, prevents the illegal export of weapons of mass destruction and high technology goods, and helps prevent reporting errors, which affect the accuracy and coverage of export trade data.

The Census Bureau is mandated by Title 13 of the United States Code, Chapter 9 to collect, compile, and publish the official export trade statistics. These statistics are compiled from data reported on the SED. The Census Bureau collects and processes approximately 1.8 million export transactions per month and projects this number will grow at a rate of 6 percent each year for the next 10 years. The collection of these transactions has been, for the most part, a manual process. The AES is the tool by which the government automates this process.

Since these are the official U.S. trade statistics, the AES provides quality data through up front editing. These data are used by the government and the private sector. The government uses these data to determine the Balance of Trade, to negotiate trade agreements with other countries, and to locate markets for U.S. exporters. The private sector uses the data to measure the impact of foreign competition, track trade flows with our trading partner countries, conduct market research, and develop and determine individual trade policies.

The AES saves time and money and eliminates duplicate reporting of data among the Census Bureau, Customs, the Bureau of Export Administration, and the Department of State. The National Council on International Trade Documentation conducted a survey and found that it costs the private sector approximately $18 to $75 to file a paper SED and approximately three times as much to correct a SED. Another survey revealed that it costs $1 to $2 to file the SED data electronically.

AES certified exporters or their authorized agents transmit the SED (commodity data) to the AES in one of the formats accepted by the system and the filer's identification (ID) number and unique shipment reference number (unique for 5 years) to reference the shipment. These data are edited by the system against various edits and agency requirement files. These agency requirement files include the munitions list and Bureau of Export Administration denied parties and license lists. If the data do not pass the edits, a message is sent back asking the filer to correct and resubmit the data. If the data are filed without errors, the AES returns a confirmation number. Upon acceptance by the AES, the filer delivers, to the carrier both the cargo, and notification that the shipment was transmitted through the AES. The carrier submits the transportation data to the AES upon receipt of the cargo and the notification. The AES matches the commodity and transportation data to form a complete export transaction. (See Appendix H AES Process Flow Chart.)

Section 30.12 of the Foreign Trade Statistics Regulations requires that SED data be submitted to the carrier prior to export, except where specifically exempt. The trade community wanted, in the AES, some form of post departure filing, to accommodate current business practices; to accommodate filers of the now defunct Automated Export Reporting Program; and to assist exporters or filers in cases where the information is not available predeparture. Therefore, the Census Bureau, the U.S. Customs Service (Customs), other Federal agencies and the exporting community entered into Interest-Based Negotiations (IBN) to define post-departure filing options. The results were two additional filing options, options 3 and 4. The filing of the paper SED and the pre-departure filing of all data required on a SED were categorized as options 1 and 2 respectively. Option 3 provides for filing a minimum of 14 specific data elements, pre-departure, and filing the complete data within 5 days of export. Option 4 provides AES certified filers the authority to file an approved exporter's complete data within 10 days after export.

The AES accepts data using the national standard, ANSI X-12, the international standard, UN/EDIFACT, and the Customs Proprietary format. Software in these formats may be developed using specifications as provided on the AES Web site, <www.customs.gov/AES>, or purchased from AES certified software vendors. Data may be transmitted through AES Certified Service Centers.

When either the AES or the client's system is down, dialogue between the client and the client's Census Bureau or Customs client representative takes place and the established "Downtime Policy" becomes effective, that is, the cargo moves.

III.B **AES*Direct* OVERVIEW**

AES*Direct* is the U.S. Census Bureau's free, Internet system for filing Shipper's Export Declaration (SED) information to the Automated Export System (AES). The AES is the electronic alternative to filing a paper SED. Exporters, forwarders, or anyone responsible for reporting export information may use the system.

AES*Direct* streamlines the exporting process by reducing the paperwork burden on the exporting community, reducing costly document handling and storage, and ensuring export information is filed timely. AES*Direct* improves the quality of export trade statistics and helps the Census Bureau provide quality statistics to its customers, the government, and the private sector.

Participation in the AES requires the development or purchase of the software necessary to communicate with the AES computer. Some small and mid-size exporters, forwarders, and other filers of the export data are unable to participate in the AES because of additional costs. To accommodate these filers, who collectively account for a large portion of the export transactions, the Census Bureau, at its expense, contracted out the development and maintenance of an Internet-Based SED Filing system for the AES, AES*Direct*. AES*Direct,* which became operational on October 4, 1999, provides online registration, tutorial, certification, and help. AES*Direct* provides for both interactive and batch filing. Currently, AES*Direct* is capable of handling 100,000 SEDs per month, with the capacity to expand in increments to handle 500,000 transactions per month, 100,000 unique filers, and up to 2,000 SEDs per batch for Export Filing Options 2 and 4. AES*Direct* is operational 24 hours a day, 7 days a week, and a staffed help desk is available from 7am to 7pm EST. AES*Direct* provides data security through encryption and user authentication.

Even though AES*Direct* was designed with the small and mid-size filers in mind, any exporter, forwarder or anyone responsible for reporting export information may use this system.

III.C AUTOMATED EXPORT SYSTEM (AES): SYSTEM DESCRIPTION AND FUNCTIONALITY

Project Description

The Automated Export System (AES) is the cornerstone of the U.S. Customs Outbound Process. The United States Customs Service (Customs) and the United States Census Bureau (Census Bureau) developed the AES to assist in the enforcement of export laws, improve data collection of trade statistics, and facilitate export trade. The AES provides for the electronic filing of the Census Bureau's Shipper's Export Declaration (SED) and electronic filing of the Customs manifest. As the primary export information gathering and processing system, the AES was developed through cooperative efforts with Customs, the Foreign Trade Division of the Census Bureau, the Bureau of Export Administration (BXA), the State Department's Office of Defense Trade Controls, other federal agencies, and private industries with export missions.

The AES system electronically collects key export data from exporters/exporters' agents, and outbound carriers. The consolidated export data as required by several government agencies has eased the data-filing burden for exporters, while streamlining the Federal data collection process. In meeting the needs of both Customs and the Census Bureau, the AES provides detailed real-time export information that systematically identifies high risk shipments for examination and helps prevent reporting errors, which affect the accuracy and coverage of export trade data.

The AES targets high-risk vessel shipments and noncompliant exporters and carriers for outreach and compliance actions. Electronic filing of data through the AES provides Customs with a valuable tool for the identification of high-risk shipments based on specific targeting data, that is screened against information provided by the exporter. The AES has focused attention on the new enforcement efforts directed at the existing SED filing requirements. Before the AES, Customs Officers responsible for the enforcement of export laws had virtually no data to sort and target high risk cargo from low risk cargo. Inspectors expressed the need for a comprehensive automated system to alleviate the tremendous burden of reviewing paper documents.

The AES allows agents to easily access supporting documents for court cases, conduct historical reviews, and input criteria in the automated system to apprehend individuals suspected of

criminal activities. The AES also redirects the efforts of administrative personnel to compliance or enforcement actions. In the paper environment, it is estimated that up to half of the hours spent working the outbound process is associated with administrative activities. The AES allows these tasks to be performed in an automated fashion, thereby increasing available hours that can be dedicated to enforcement and compliance, without the need for additional personnel.

Participation in the AES has increased dramatically since its July 1997 nationwide expansion to accept all modes of transportation for commodity data. As of December 1999, approximately 162,000 exporters file required information electronically through the AES using forwarders or service centers. With the termination of the Department of Commerce's Automated Export Reporting Program (AERP) in December 1999, the AES is the only automated reporting vehicle for the collection of export data used for enforcement and statistical purposes.

The AES does not change current legislative or regulatory pre-departure export reporting requirements. The major beneficiaries of the AES are the exporting trade community, Customs, the Census Bureau, other Federal agencies participating in AES, and ultimately, the American public. With streamlined export filing through the AES, the exporting public benefits from: 1) the relief from paper filing; 2) a consolidated filing point for government export transactions; and 3) fewer delays and inspections, as a result of the more effective targeting afforded by AES data. Paper less processing saves both human and environmental resources. The Nation benefits from more accurate trade statistics and better enforcement of export laws, which protect 1) the national security, 2) competitive economic interests, and 3) the safety of the American public.

Project Background

The AES was piloted in early 1993 in Charleston, South Carolina. Though limited in scope and duration, the pilot provided proof of concept and verified the potential of the AES. A subsequent cost/benefit analysis of the AES pilot validated development of a full AES in support of Customs' export enforcement mission. In 1994, following the cost/benefit analysis, a Customs Single Issue Conference Focus Group recommended the development of the AES. That decision led to a Commissioner Decision Memorandum approving the AES.

Since that time, the modular, incremental project development strategy employed by the AES has resulted in seven major releases of the AES accomplished on schedule and within budget. These are:

- AES functionality at five seaports: July 1995.
- Expansion to all seaports nationwide: Oct 1996.
- Addition of client representative monitoring functions: March 1997.
- Expansion of commodity filing to all modes of transport at all ports: July 1997.
- AES-PASS feature for post-departure filing: November 1997.
- State Department munitions license decrementation (for non-AES filers) at four major ports: November 1998. Nationwide implementation: 4th Quarter, 1999.
- Vessel Enhancements/Option 4 Post-departure SED filing: March 1999.

In addition, the following other agency functionality exists in the AES:

- Census Bureau edits; online accesses; batch transmission of commodity data to the Census Bureau.
- System validation of outbound shipments against Bureau of Export Administration (BXA) regulated and Special Comprehensive Licenses; Denied Parties List reference file established for Customs field use.
- System validation of outbound shipments against State Department approved munitions export licenses; program completed for flat file transfer of munitions shipment data to State/ODTC.
- License codes for Treasury/OFAC shipments.
- License codes for Nuclear Regulatory Commission shipments.
- State Department munitions license decrementation (for AES filers)

In 1999, additional enhancements to the AES focused on collecting transportation data and commodity reporting options that resulted from Interest-Based Negotiations (IBN) with the trade community concerning timing of export commodity filing. In March 1999, IBN Option 4—Post Departure SED filing was implemented. Additionally, the AES began accepting booking information from ocean carriers prior to departure, as part of their AES filing (Vessel Carrier Enhancement). The Sea Carrier Initiative will help alleviate the problem of fines being assessed for missing SEDs for participating AES carriers. This should also serve as an incentive for greater participation in electronic ocean vessel manifest filing.

The requirements for the collection of transportation data for air and overland are under development through meetings with

industry transportation groups. Implementation of this segment of the system is planned to be phased in during FY 2000. Other planned future enhancements include automatic release of in-bond and temporary import-bond (TIBs) and automatic close out of drawback. Full (major) functionality in the AES should be achieved by the end of FY 2002.

The following Sections A through C describe how the AES has met, and continues to support the requirements, initiatives, and goals of the Customs' outbound programs, the Census Bureau's statistical requirements, export control requirements, and the trade community. Section D discusses the enforcement aspects of the AES.

A.   The AES and the Outbound Process

The Outbound Vision:

To facilitate international trade, while achieving the highest degree of compliance with U.S. export requirements in order to protect the U.S. national security, economic interest, and the health and safety of the American public.

The Outbound Mission:

To develop, execute, and oversee Outbound policies and processes resulting in informed compliance, targeted enforcement, collection of accurate data, and a reliable level of service for the public and private sectors.

In line with the Investment Management Process, the AES Team participated in the formulation of an Outbound Business Plan defining an action strategy for the next 5 years. The process teams reviewed the needs of both external and internal customers and determined the features and goals needed for the AES.

The identification and prioritization of additional features is now being driven by the Director of Outbound Programs, Customs, and process design teams, with close coordination between the AES programming team and the process teams.

The AES supports the Outbound Enforcement Strategy in the Customs Annual and 5-Year Plans. The AES goals are:

- to be the lead government system in the electronic collection and dissemination of export data; and
- to increase the level of compliance with export requirements.

The AES provides a historical record of exports for investigation or research. The AES allows agents to easily access supporting documents for court cases, conduct historical reviews, and input criteria in the automated system to apprehend individuals suspected of criminal activities.

B.   The AES and Partnership Agency Interfaces

The interface with the Department of State for maintenance of license and registrants information in the AES was implemented in May 1998. Implementation of license decrementation for AES filers was also effected at that time. Implementation of license decrementation for non-AES filers is in process.

Weapons are one of the primary controlled exports of the United States. It is essential that these exports are tracked and controlled to prevent these weapons from falling into the hands of those who would harm the national interest. ODTC approves approximately 3,000 new licenses for weapons exports per month. These licenses are held and decremented manually at Customs ports, creating resource inefficiencies for Customs, as well as additional costs for legal exporters. The AES interface automates the process, allowing for the electronic decrementation of the licenses. Congress is now demanding greater accounting for these exports and it is planned that the AES will be able to provide the required information for State Department reporting. The Munitions License database has been transferred from the Treasury Enforcement Communications System (TECS) to the AES.

Dual use material, which may be used to produce weapons, is a significant controlled U.S. export. The AES interface with the Department of Commerce's Bureau of Export Administration (BXA) will provide authorized Customs users access to license data through the AES. The transfer of the BXA license module from the TECS to the AES is anticipated in FY 2000.

Customs works closely with the Department of Justice's Drug Enforcement Administration (DEA) to ensure compliance with enforcement of laws that apply to chemicals that are imported, exported, or travel in transit through the United States. This project will provide authorized Customs users access to data on chemical exports and chemical inspection through the AES.   The transfer of the current database from TECS to The AES is expected to occur during FY 2000.

Schedules for other agency interfaces with the AES are proposed and are dependent on both Customs and other agency resources and system capability, which will be identified as development schedules become available. It is expected that implementation will be ongoing through at least 2002.

For additional information on other Government agencies, see Other Government Agency Export Requirements.

C. The AES and Trade Participation (as of May 15, 2000)

- More than 600 companies are filing data through the AES on behalf of more than 160,000 unique exporters.
- Averaging more than 600,000 commodity lines for the month of March 2000. This represents 59.11 percent of the Non-Canadian export shipments.
- 403 companies are currently testing for participation or developing software for the AES. This includes 225 forwarding agents, 98 exporters, 53 software providers, 19 carriers, and 8 NVOCCs.

A major marketing effort has been underway that has significantly increased participation in the AES. Both the Census Bureau and Customs are working closely with exporters, forwarders, software providers, and NVOCCs to ensure their successful participation. The long-range goal is to reduce paper filing by 75 percent by 2002. With the termination of Automated Export Reporting Program (AERP) in December 1999, most AERP filers were converted by that time. The AERP filers accounted for approximately 4 million SED transactions per year.

The trade community, while supporting the concept of electronic SED filing, felt that the initial AES proposal required modification, for two primary reasons. First, a significant portion of the trade believes that pre-departure filing of SED data does not conform to current business processes. In many cases, exporters do not have complete information pre-departure. Second, the AES proposal eliminated a privilege that many exporters had exercised and relied upon for nearly 30 years, the AERP, that allowed post-departure filing of SED data for qualified exporters.

- Transition from AERP to the AES

  There were many large carriers, both air and sea, filing SED information through the AERP. The AERP, that allowed for delayed electronic reporting by exporters and carriers,

expired in December 1999. Prior to the termination of AERP, these carriers filing on AERP were encouraged to convert to filing SEDs through the AES.

The differences between the AES and the AERP are found in the scope of the systems. The AES captures both commodity and transportation data, while AERP captures only commodity data. The AES was developed as a data repository for use by more than a single government agency; AERP had a single function design.

- The AES Filing Options

In response to the trade communities concerns, Customs, the Census Bureau, and the trade community representatives held meetings during the spring of 1998 to resolve the remaining differences, subsequently agreeing to an "Interest-Based Negotiation" (IBN). A subcommittee of the Customs Oversight Activities Committee (COAC), supplemented with other experienced members of the exporting community, was selected to represent the trade community. Several employees of both Customs and the Census Bureau represented the government.

The purpose and scope of the IBN negotiations was to determine the source, timing, and level of detail necessary to capture export commodity data in an automated environment. The IBN team sought a solution that would be consistent with current business practices of the exporting community, while still meeting the regulatory requirements and needs of all interested government agencies. The following options were agreed to:

Option 1: Paper SED, Pre-Departure. This option refers to the current method of filing paper Shipper's Export Declarations (SEDs) and offers no electronic communication. Currently, goods subject to State Department licenses are required to be processed under Option 1. (AES filers are "dual filing;" that is, they are filing both electronically through Option 2, as well as filing paper SEDs to satisfy State Department requirements.) The paper SEDs will continue to be given to the exporting carrier prior to exportation, although the State Department could approve exporters to only file once through the AES.

Option 2: AES With Full Pre-Departure Information. Option 2 is used for shipments for which full commodity information is available prior to departure or for which full pre-departure information is required.

Option 3: AES With Partial Pre-Departure Information. Option 3 is available for shipments for which full commodity information is not available prior to export or for shipments by Option 4 exporters, for which pre-departure information is required for licensing or other purposes. All remaining data elements must be transmitted within 5 days of the date of exportation. This option is available to AES filers without prior approval.

Option 4: AES With No Pre-Departure Information Option 4 provides a full post-departure filing option to approved exporters. Qualified shipments can be exported with no pre-departure information. Complete commodity information must be filed within 10 working days from the date of exportation.

- Enhancements to the Vessel Transportation Module

  Currently the AES provides for the transmission of transportation data by carriers and commodity data by exporters, exporter agents, or service centers. When both the exporting carrier and commodity filer are AES participants, the separate transmissions are matched by an external transaction number (XTN) originating with the filer. Because the XTN is sometimes unavailable when a booking is first made (when the export transaction is initiated), a problem exists with matching transportation and commodity data. The Vessel transportation enhancements, agreed to by Customs, the Census Bureau, and the Sea Carrier Summit participants, were implemented in March 1999. The enhancements include requiring pre-departure transmission of carrier booking information and matching booking and commodity data utilizing the carrier's booking numbers.

D. The AES as an Enforcement Tool

One of the roles of the Outbound Process is to assist in anti-terrorism efforts. Under the Anti-terrorism Initiative, Congress appropriated funds for Customs to build an Outbound component in the rules-based Automated Targeting System (ATS) to target high risk shipments involved with terrorist attacks, as well as contraband or other violations. The distributed targeting infrastructure in the AES enables field users to conduct targeting with the AES as the critical data source.

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The AES enables inspectors to save time by viewing open shipments on-line, allowing them to examine more shipments in less time. Using advance data in the AES, inspectors have been able to improve their assessment of which export shipments to inspect. Then, by using enforcement criteria imbedded in the AES processing, inspectors are able to better target shipments for examination based on the advance information. Additionally, local Outbound officers possess the capability to build port-specific enforcement criteria into the AES to meet local enforcement needs. This aspect of the AES allows Customs to perform smarter targeting, versus the "hit-or-miss" approach of the past. The ability to zero in on only high-risk shipments means less cargo is held up. The majority of shipments, those that are low risk, continue to move, unimpeded.

Inspectors also utilize the AES to retrieve historical information for case research in investigations into illegal exports, including those of precursor chemicals used to manufacture narcotics or chemical weapons. The AES also assists in preventing exports of illegal weapons, as the Strategic Investigations utilization of the EXODUS Command Center monitors the AES in its firearms traffic enforcement duties.

- Legislative Compliance

The AES supports the following Export Regulations:

- *Merchandise Trade Statistics* – 13USC, Chapter 9 requires the Department of Commerce (Census Bureau) with assistance of the Department of Treasury (Customs) to collect, compile, and publish export trade statistics.

- *Currency and Foreign Transactions Reporting Act* – 31USC5316 requires persons to report to Customs the transportation out of the United States of more than $10,000 in coin, currency, travelers checks, or bearer instruments. This law is used to interdict the resulting profits of the drug trade or other illegal activities.

- *Stolen Vehicles* – 19USC1627a covers the interdiction of stolen vehicles that are being exported.

- *Arms Exports* – 22USC2778 imposes criminal penalties for the exportation of weapons and munitions contrary to U.S. interest.

- *Critical Technology* – 50USC2401 covers the export of "dual use" civilian technologies that are readily adaptable to

military use or in the manufacture of weapons of mass
destruction.

- *Drug Exports* - 21USC953 prohibits the exportation of
  controlled substances.

- *Drug Traffic* - 21USC955 prohibits any person from possessing
  a controlled substance on board a vehicle, vessel or
  aircraft departing from the United States.

- *Sanctions and proscriptions in support of U.S. Foreign
  policy* - Enforce embargoes administered by the Office of
  Foreign Asset Controls as directed by the Trading with the
  Enemy Act 31CFR Part 500 and the Trade with Cuba Act,
  22USC2370(a).

- *Statistical List* - 19USC1484 directs Customs to establish
  for statistical purposes, an enumeration or list of articles
  being exported from the United States.

- *Miscellaneous Provisions* - The Foreign War Materials Act,
  22USC401, the Atomic Energy Act, 42USC2011, and the
  Endangered Species Act, 16USC668aa.

- *Customs Modernization Act*

- The AES Improves Data Quality

In the paper environment, it is known that a significant
percentage of export shipments that require SEDs are never
reported. It is also believed that under reporting of
shipments accounts for approximately one-third of the U.S.
trade deficit.

The AES supports Census Bureau initiatives to improve the
ability to capture export statistics. The AES provides the
capability to readily identify and more accurately analyze
information reported collectively or individually by exporters
and forwarders, which can be used in the following ways:

- Build company profiles that identify the type and volume of
  commodities shipped and potential destinations.
- Monitor error rates for individual participants and make
  data driven decisions to identify those in need of
  assistance or education.
- Develop company-based edits, that will detect the less
  obvious reporting errors.

Project Development Strategy

The AES project development strategy utilizes a modular, phased implementation approach tailored to the Outbound business need. This method is consistent with the directives outlined in the Clinger-Cohen Act. Section 35 of that act requires the Federal Acquisition Regulations to "address complex information technology objectives incrementally, in order to enhance the likelihood of achieving workable solutions for attainment of those objectives." Therefore, rather than attempting to implement a major system all at once, projects are phased incrementally, in modules. The AES development activities are being conducted using the Incremental Life Cycle methodology under guidelines established in the Customs Systems Development Life Cycle (SDLC) Handbook, October 1998. The AES also utilizes the Information Engineering Facility (IEF)/CoolGen CASE tool for development.

Other Government Agency Export Requirements

The Automated Export System is designed to support the data collection efforts of a number of Federal Government agencies - referred to as Partnership Agencies. The AES currently captures export data that will be shared among these agencies; it is, however, an evolutionary process.

U.S. GOVERNMENT AGENCIES WITH EXPORT REQUIREMENTS

Agriculture, Department of:
Agricultural Marketing Service
Animal Plant Health Inspection Service
Food Safety and Inspection Service
Foreign Agricultural Service

Army, Department of the:
Corps of Engineers

Commerce, Department of:
U.S. Census Bureau
Bureau of Export Administration
International Trade Administration
National Marine Fisheries Service/NOAA
Office of Textiles and Apparel/ITA

Consumer Product Safety Commission
Defense, Department of:
Defense Investigative Service

Defense Logistics Agency
Defense Security Assistance Agency
Defense Technology Security Administration

Energy, Department of:
Energy Information Administration
Office of Arms Control and Nonproliferation

Environmental Protection Agency

Federal Maritime Commission

Health and Human Services, Dept. of:
Centers for Disease Control
Food and Drug Administration

Interior, Department of the:
U.S. Fish and Wildlife Service

International Trade Commission

Justice, Department of:
Drug Enforcement Administration

Labor, Department of:
Bureau of Labor Statistics

Nuclear Regulatory Commission

Small Business Administration

State, Department of:
Office of Defense Trade Controls

Transportation, Department of:
Bureau of Transportation Statistics
Federal Aviation Administration
Maritime Administration
National Highway Traffic Safety Admin.
U.S. Coast Guard

Treasury, Department of the:
Bureau of Alcohol, Tobacco and Firearms
Internal Revenue Service
Office of Foreign Assets Control

United States Arms Control and
Disarmament Agency

CURRENT AES PARTNERSHIP AGENCY INTERFACES

The U.S. Customs Service/AES has developed various levels of automated interaction with the following agencies and is exploring further enhancements to the interfaces as noted.

Bureau of Export Administration (BXA)/Commerce
Office of Defense Trade Controls (ODTC)/State
Bureau of the Census (Census)/Commerce
Nuclear Regulatory Commission (NRC)
Office of Foreign Assets Control (OFAC)/Treasury

Bureau of Export Administration (BXA)/Commerce

The BXA issues licenses for a variety of Outbound commodities regulated by that agency and designation of categories of "exceptions" to licensing requirements.

In Place --

Data pertinent to BXA are currently collected as part of the electronic transmission of commodity information (SED) from the AES filer: License Code, License Number, ECCN (Export Control Classification Number). The Exporter/Agent selects the appropriate License Code (table includes BXA-approved Licenses, Special Comprehensive Licenses (SCL), and License Exceptions) from the License Type Code Tables.

The Exporter/Agent enters an ECCN where applicable (required for all BXA-approved Licenses and SCLs; for License Exceptions, as noted on the AES License Type Code Table).

The Exporter/Agent enters the approved BXA License Number for all BXA-approved Licenses and SCLs.

A System validation of outbound shipments is performed against BXA-approved Licenses and Special Comprehensive Licenses. With the AES, Customs is still the responsible agency for reviewing export shipment information prior to departure. Note that no license application data are processed through the AES.

A table and updates from BXA on the Denied Parties List are maintained in the AES for Customs use. A hyper link from Customs/AES Web site to the BXA home page on the Internet also provides access to the List to Exporters/Agents, to assist in their compliance efforts.

Future Enhancements --

Customs will collect and transmit to BXA commodity/transportation data on all export shipments.

The ultimate goal is to eliminate the trade community's and Customs' manual processing and paper review of the SED/approved license data and replace them with data online to view for verification purposes. This will result in more efficient and faster handling of export shipments at the ports.

Office of Defense Trade Controls (ODTC)/State

The ODTC issues licenses for permanent exports and temporary exports and imports of certain munitions (defense articles and services).

In Place --

Data pertinent to ODTC are currently collected as part of the electronic transmission of commodity information (SED) from the AES filer: License Code, License Number/License Exemption Citation. The Exporter/Agent selects the appropriate License Code (i.e., Permanent Export, Temporary Import, Temporary Export, License Exemption, etc.) from the License Type Code Tables.

The Exporter/Agent enters the approved ODTC License Number or the License Exemption Citation (i.e., CFR...) for all munitions shipments.

A System validation of outbound shipments is performed against ODTC-approved Licenses. With the AES, Customs is still the responsible agency for reviewing export shipment information prior to departure. Note, that no license application data is processed through the AES.

An automated munitions License Decrementation Program has been developed in Customs/AES. It has been implemented for local use at four ports and was expanded nationwide in the first half of 1999. Nationwide implementation allowed for decrementation of licenses, even when the shipment departed ports other than where the license resides.

For AES filers with DSP-5 licensed goods, the filer's export shipment data entry will trigger the decrementation process.

For non-AES filers, the program will allow Customs field personnel to key in the basic data on the dollar value of the shipment, etc. The program will decrement the license and calculate the remaining balance.

Future Enhancements --

Customs will collect and transmit to ODTC commodity/transportation data on export shipments subject to munitions licensing requirements.

A return message will be sent to the AES filer with information on the ODTC/State remaining license balance for those export shipments for which they are the responsible party.

The ultimate goal is to reduce the trade community's, Customs' and ODTCs' manual processing and paper review of the SED/approved license data and replace them with current data online to view for verification purposes. This will result in more efficient and faster handling of export shipments at the ports.

Bureau of the Census (Census Bureau)/Commerce

The Census Bureau is responsible for determining statistical requirements and collecting, compiling, and publishing statistics relating to U.S. exports, imports, balance of trade, and transportation relating thereto.

In Place --

Customs collects and transmits to the Census Bureau line item commodity data provided by the exporter/agent and transportation (manifest) data provided by the carrier on all export shipments.

All line item data are subjected to Census Bureau edits provided for in the AES programs prior to acceptance of the data.

The ultimate goal is to eliminate the trade community's, Customs', and the Census Bureau's manual processing and paper review of the SED and replace them with accurate data online to use for analytical and statistical reporting purposes. This will result in more efficient and faster handling of export shipments at the ports.

Nuclear Regulatory Commission (NRC)

The NRC issues licenses for shipments of nuclear material and equipment.

In Place –

Data pertinent to the NRC are currently collected as part of the electronic transmission of commodity information (SED) from the AES filer: License Code, License Number/General License Citation.

The Exporter/Agent selects the appropriate License Code (i.e., Specific, General License) from the License Type Code Tables.

The Exporter/Agent enters the approved NRC Specific License Number <u>or</u> the General License Citation (i.e., CFR...) for all nuclear material/equipment shipments.

With the AES, Customs is still the responsible agency for reviewing export shipment information prior to departure. Note, that no license application data are processed through the AES.

Future Enhancements --

Customs will collect and transmit to the NRC commodity/transportation data on export shipments subject to that agency's nuclear material and equipment licensing requirements.

A System validation of outbound shipments will be performed against NRC-approved Licenses.

The ultimate goal is to eliminate the trade community's and Customs' manual processing and paper review of the SED/approved license data and replace them with data online to view for verification purposes. This will result in more efficient and faster handling of export shipments at the ports.

Office of Foreign Assets Control (OFAC)/Treasury

The OFAC issues licenses for certain export shipments that would otherwise be barred by specific country sanctions.

In Place --

Data pertinent to the OFAC are currently collected as part of the electronic transmission of commodity information (SED) from the AES filer: License Code, License Number/General License Citation.

The Exporter/Agent selects the appropriate License Code (i.e., Specific, General license) from the License Type Code Tables. The Exporter/Agent enters the approved OFAC Specific License Number or the General License Citation (i.e., CFR...) for allowable shipments to sanctioned countries.

With the AES, Customs is still the responsible agency for reviewing export shipment information prior to departure. Note, that no license application data are processed through the AES.

Future Enhancements

Customs will establish a Specially-Designated Nationals/Terrorists table in the AES for Customs use, with regularly transmitted updates from the OFAC. A hyperlink will be established from Customs/AES Web site to the OFAC home page on the Internet to provide access to the list for Exporters/Agents to assist in their compliance efforts.

Customs will collect and transmit to the OFAC commodity/transportation data on export shipments subject to that agency's sanctioned countries licensing requirements.

A System validation of outbound shipments will be performed against OFAC approved Licenses.

The ultimate goal is to eliminate the trade community's and Customs' manual processing and paper review of the SED/approved license data, and replace them with data online to view for verification purposes. This will result in more efficient and faster handling of export shipments at the ports.

POTENTIAL AES PARTNERSHIP AGENCY INTERFACES

In addition to the AES interfaces with Partnership Agencies already in place, we are working with other agencies with export permit/license requirements as a first priority. These efforts will be followed by exploring the potential for interfacing with agencies that have export monitoring and reporting responsibilities. Feasibility research has been conducted and preliminary meetings have been held with a number of the U.S. agencies in these groups. Joint Commitment Statements have been signed with some of these agencies and development of User Requirements are in progress.

Potential agencies include:

C Agriculture/Food Safety and Inspection Service (FSIS)

C Treasury/Bureau of Alcohol, Tobacco, and Firearms (ATF)

C Justice/Drug Enforcement Administration (DEA)

C Energy/Office of Arms Control & Nonproliferation (NN)

C Transportation/Maritime Administration (MARAD)

C Energy/ Energy Information Administration (EIA)

C Defense/Defense Security Assistance Agency (DSAA)

C Agriculture/Foreign Agricultural Service (FAS)

It should be noted that progress is dependent on partnership agency cooperation and available resources. For certain agencies researched, current regulations and processes are outdated or do not lend themselves to automation without significant revisions.

For the potential interfaces being explored, benefits to the trade community and U.S. government agencies for automating outbound processes do not always include elimination of paper forms at the time of shipment. A considerable number of export requirements placed on the trade community and government involve record keeping, after-the-fact reporting, monitoring, etc. Automation of any of these steps in the process will ultimately create a savings in personnel resources, data storage, and retrieval, in addition to facilitating the movement of merchandise out of the United States.

Agriculture/Food Safety and Inspection Service (FSIS)

- Initial meeting: December 1996; feasibility study in progress the FSIS requires certified export permits for meat and poultry products.
- Transmission of permit data by exporters through the AES would eliminate the requirement for a paper form at time of export.
- The AES data on meat/poultry shipments would be electronically batched to the FSIS.
- The FSIS also is interested in electronically transmitting health certificates to the countries of destination.
- The FSIS has potential to qualify as a FAST TRACK Agency.
- Impact on the AES participants: Additional data elements (i.e., permit number) will be required on a conditional basis for exports of meat/poultry.

Treasury/Bureau of Alcohol, Tobacco and Firearms (ATF)

- Initial meetings: July/August 1995.
- Discussed various ATF commodity-related export requirements-- trade interest in Tobacco Export Permit (Form 2149/2150), certifies that tobacco exported, relieves shipper of Fed. Excise Tax liability; and Firearms Export Permit (Form 9), exporters w/State munitions license and ATF requirements.
- Other export forms dealt with drawback, tax exemptions, annual reports required by statute.
- Potential to qualify as a FAST TRACK Agency.
- As first phase, ATF is exploring electronic batching of the AES data on all export transactions related to alcohol, tobacco, firearms and explosives within their purview.
- No additional work burden on the AES participants.

Justice/Drug Enforcement Administration (DEA)

- Initial meeting: August 1995.
- Discussed Precursor Chemicals (Form 486) and Controlled Substances (Form 236) export requirements.
- Reference Form 486--no control number; 15-day notification requirement.
- Regulatory changes needed in-house to update process and accommodate automated environment such as the AES.
- At present, license interface with the AES is not feasible.

Energy/Office of Arms Control & Nonproliferation (NN)

- Initial meeting: December 1995; joint commitment statement signed August 1996.
- Designated as a FAST TRACK agency.
- Concerned with technology transfer.
- Feedback needed on actual shipments against approved licenses (Commerce/BXA, State/ODTC, NRC) reviewed by Energy/NN.
- User requirements being developed for Energy/NN receipt of AES data on above-licensed export transactions
- Exploring methodology for tracking non-controlled exports.
- No additional work burden on the AES participants.

Transportation/Maritime Administration (MARAD)

- Initial meeting October 1995; joint commitment statement signed December 1996.
- Designated as a FAST TRACK agency.
- MARAD assures that U.S. flag carriers are used for U.S. government shipments of government personnel household/personal goods, defense materials/equipment, Agency for International Development (AID) assistance, etc.(U.S. Government-Impelled Ocean Vessel Shipments).
- No specific form involved; CFR 381 & Cargo Preference Act requires exporters of such shipments to provide specific data to MARAD.
- MARAD currently obtains data from Bills of Lading.
- Work started (user requirements) for MARAD access to AES data on related export transactions.
- Impact on The AES participants: Additional data elements-- Federal Agency/ Contract Number; and a YES/NO indicator "USG: ___ Shipment " (to flag pertinent export transactions).

Energy/Energy Information Administration (EIA)

- Initial meeting: April 1996; feasibility study in progress.
- Federal Energy Administration Act/PL 93-275, Sect. 25.
- Statute requires EIA to collect data on all transactions, sales, exchanges, or shipments for export from the U.S. to a foreign national of coal, crude oil, residual oil or any refined petroleum products.
- Exploring EIA receipt of The AES data on related export transactions.
- No additional work burden on AES participants.

Defense/Defense Security Assistance Agency (DSAA)

- Telephone discussions with DSAA representatives: January 18, 1996; interviews with State/ODTC, Customs field and trade community over second half 1995.
- U.S. Foreign Military Sales (FMS) Program – DOD Form 1513/Letter of Offer and Acceptance (LOA) and State DSP-94.
- Trackable through FMS Case Number.
- This automated interface would complete the picture for U.S. exporters dealing with munitions/equipment sales overseas (e.g., State/ODTC interface).
- Current process is not workable in an electronic environment for validation of DSAA LOA approvals; State DSP-94 is self endorsed.

Agriculture/Foreign Agricultural Service (FAS)

- Initial meeting/briefing on the AES: November 1997.
- FAS issues permits to U.S. manufacturers (300+) that use imported sugar to make food products to be exported. FAS is required to monitor exports of these "sugar-containing products. "
- Potential to receive permit file to validate shipments; send FAS shipment data; and set up National Criteria for non-compliant exporters.
- Feasibility study commenced January 1998.
- Study revealed that the majority of exports were to Canada, for which no SED is required; thus, no means to track shipments. Project not feasible at this time.

III.D AES*Direct* SYSTEM DESCRIPTION AND FUNCTIONALITY

Introduction

AES*Direct* is the Census Bureau's free, Internet-based system for the filing of SEDs information to AES. It is the Internet alternative to filing paper SEDs or filing directly with AES at U.S. Customs. Exporters, freight forwarders, or anyone responsible for reporting export shipment information to the U.S. government can use AES*Direct*.

AES*Direct* significantly streamlines the export reporting process by reducing the paperwork burden, reducing costly document handling, and ensuring that export information is filed in a timely manner. It also helps ensure that companies using it have complied with the U.S. government export reporting requirements.

AES*Direct* was originally developed to assist small and mid-size companies in filing export data electronically to the U.S. government; companies with scarce resources to invest in highly technical, expensive hardware and software to report to AES at Customs. However, companies of any size and number of export shipments can use AES*Direct*.

Participation

AES*Direct* went into production on October 4, 1999. Since that time over 600 companies have registered for AES*Direct* and over 350 companies also have completed the tutorial and passed the certification quiz. Of those companies, over 225 now are reporting their export shipments through the system. Participation in AES*Direct* has been expanding greatly. During its 3 months of operation in 1999 only 8,600 shipments were submitted. During the month of April 2000 alone, over 50,000 shipments have been filed in AES*Direct,* with over 165,000 for the year to date.

Functional Overview

AES*Direct* is designed to capture and edit all data fields from the SED, including mandatory, conditional, and optional data. When SED information is entered interactively into AES*Direct*, an immediate validation of the data is performed. If errors are found, the filer is immediately notified for resolution. AES*Direct* will not

allow data with fatal errors to be transmitted to AES at
Customs. When AES*Direct* accepts SED data as valid, it is
automatically queued for transmission to AES and is
transmitted on an every 5-minute schedule. AES*Direct* uses
the official master reference files and tables from the
Census Bureau in the data validation process. These same
files on AES*Direct* also can be used as look-up tables to
locate appropriate codes to use in filing data.

After AES*Direct* transmits data to AES, AES will respond
back to AES*Direct* as to whether the data were accepted or
rejected by AES. Users can then query AES*Direct* about the
status of their shipments. AES*Direct* stores and retains a
filer's SED data in its secure and password protected
system for up to 5 years. At any time during this period,
SEDs can be retrieved by the filer, corrected as necessary,
and resent to AES. Filers can also use previously
submitted SEDs as templates for new shipments, simply by
changing the appropriate data fields and the shipment
number and resubmitting. This feature has the potential to
save companies time and money associated with re-keying
data.

AES*Direct* also provides filers a selection of reporting
options that can be customized to their preference. These
reports, for example, can list all shipments sent today,
sent last week, or sent to one foreign party. One can also
design a report to show a summary of shipments by time
period or any one of several other characteristics. Even
though the electronic retention meets government
regulations, AES*Direct* also provides a method for filers to
print shipment data in an easy to read format.

In addition to interactive input, AES*Direct* also provides
the capability for filers to upload a batch file from their
PC system containing multiple SEDs in two different
formats. Data submitted in this manner will also be
validated, processed, and stored in AES*Direct,* as those
submitted interactively. Both the ANSI X12 and the Customs
Proprietary Format are acceptable formats for batch files.

AES*Direct* Functionality Details

The AES*Direct* home page is pictured below in Figure 1. The
left menu bar contains three distinct areas of
functionality; Getting Started, Using AES*Direct*, and links
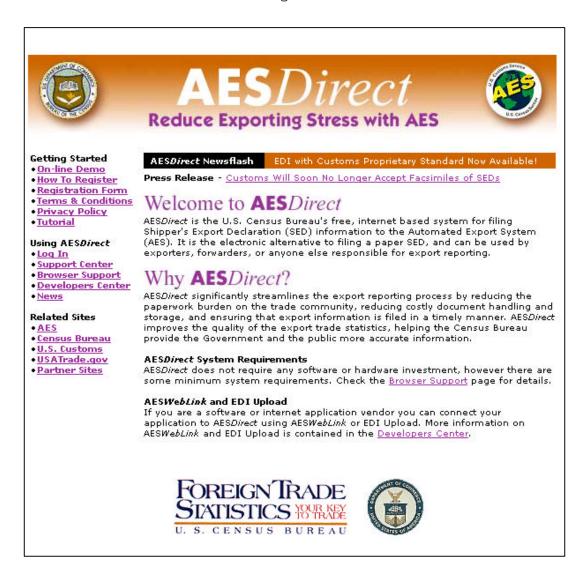to other Related Sites.

Getting Started

The basic functions in getting started with AES*Direct* include:

- Online Demo
- Registration Form
- Tutorial

The other functions in this section provide reference information concerning use and security of the system.

Figure 1.

Online Demo

The online demonstration is a screen-cam type of show that simply leads the viewer through many of the registration and data filing functions; it is also self-explanatory.

Registration Form

Figure 2 illustrates the first part of the registration form. Information from this form is needed to establish a potential AES*Direct* filer account in the AES*Direct* and AES user databases. Once this is done, an e-mail message is returned to the registrant providing a user ID and password. At this point, the account is only authorized to access the tutorial and quiz, not for filing SEDs.

Figure 2.

Tutorial and Quiz

The tutorial and quiz are required for all filers who will
use the interactive filing functions of AES*Direct*. The
tutorial is divided into four sections, as shown in
Figure 3. These sections do not have to be completed in
one session, but can be taken at the filers pace. After
completing the lessons of the tutorial, the user will then
take a short quiz to determine if they understand the
basics of filing SEDs in AES*Direct*. The quiz can be taken
as many times as necessary. Once the quiz is passed, the
filer will receive an e-mail message indicating that he is
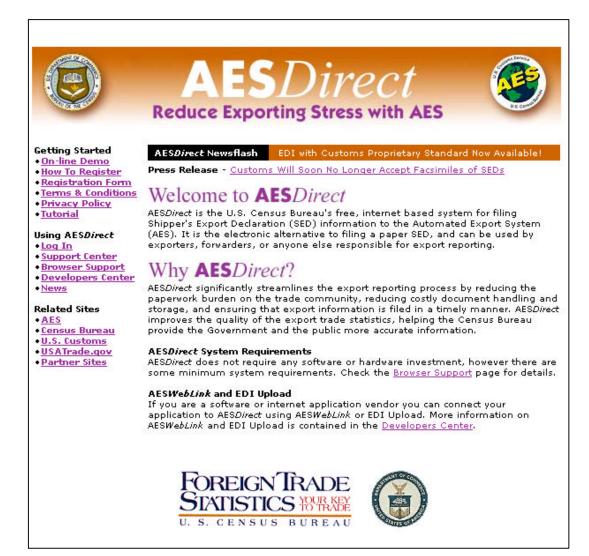authorized to file SEDS in AES*Direct*.

Figure 3.

Using AES*Direct*

The basic functions in using AES*Direct* (as shown in the left menu bar in Figure 1,) include:

- Log In
- Support Center
- Developers Center

The other functions in this section provide additional reference information concerning Web browsers supported by AES*Direct* and news items and releases.
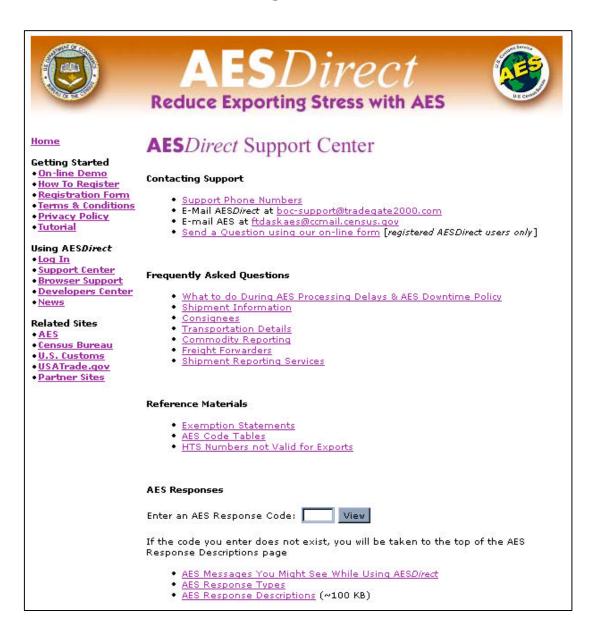
Figure 1.

Support Center

The Support Center (as shown in Figure 4) provides the filer with extensive information concerning who and how to contact staff for questions, guidance, or the resolution of filing problems. The Center also contains frequently asked questions, commodity code look-up functions, error code explanations, and additional technical information.
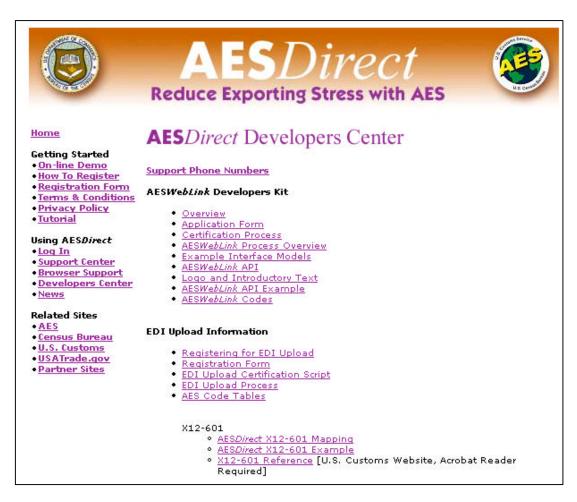
Figure 4.

Developers' Center

The Developers Center provides detailed specifications
concerning batch filing of SED data and integration of
other web applications with AES*Direct*. Batch files in both
ANSI X12 and the Customs Proprietary Format can be
transmitted to AES*Direct* via the EDI upload functions.
This section describes these processes and specifications.
AESWebLink is an exciting new option added to AES*Direct* to
permit other web applications to be integrated with
AES*Direct*. This feature will accept a record of data
already entered into another web application, such as an
invoice or bill of lading application, and use that data to
populate the SED. AES*Direct* will then solicit only the
missing data items, eliminating the need to re-key data
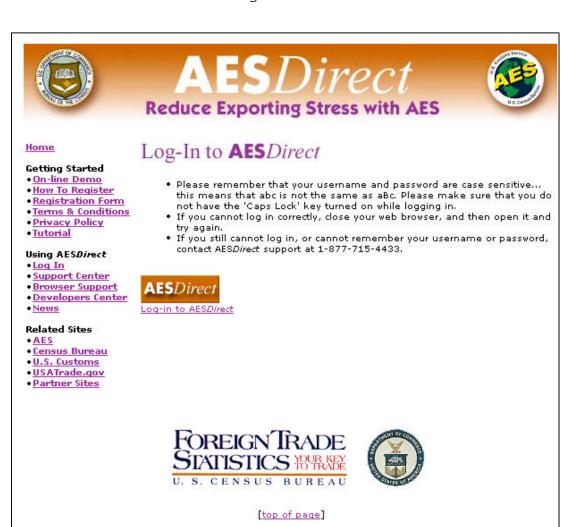already entered into the other application.

Figure 5.

Log In

The log in screen and functions, as shown in
Figure 6, permit an authorized AES*Direct* user to access the
SED portion of the system. The filer must enter his
assigned user ID and password at this point. The user can
access only SED data filed by the account, as determined by
the User ID. No one else can access it nor can the user
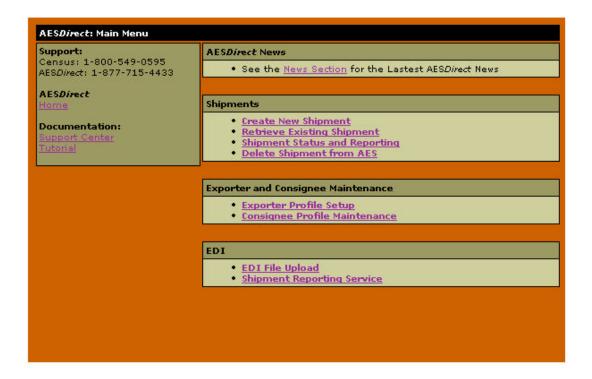access any other company's data.

Figure 6.

After successfully logging into AES*Direct*, the main menu screen is displayed, as shown in Figure 7. In this portion of the system, users can;

- Enter, retrieve, correct, or submit SED data,
- Set up profiles for their exporters or consignees,
- Upload batch files, or
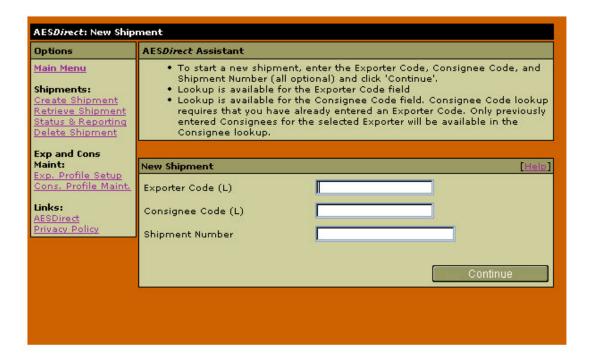- Create customized reports of data they have already submitted to AES*Direct*.

Figure 7.

Create New Shipment

This function is used to create a new SED to submit to
AES*Direct*. Figure 8 shows the initial screen used to enter
the exporter code, consignee code, and the shipment number.
Filers can establish exporter and consignee codes using the
Exporter and Consignee Maintenance function, to save data
entry time by only needing to key the codes and not the
entire name and address of each. Once these fields are
complete, the filer is then taken to the shipment viewer
screen (as shown in Figure 10) to enter the remaining SED
data.

Figure 8.

Retrieve Existing Shipment

AES*Direct* allows a filer to retrieve a shipment record that has been previously filed in the system. One can use this function to retrieve a shipment, to correct data items in the shipment, or use the shipment data as a template to create another new shipment. Figure 9 shows the screen one uses to enter the shipment reference number to retrieve an existing shipment record. Once retrieved, the filer can then use the Shipment Viewer screens to correct or change the data.

Figure 9.

Shipment Viewer: SED

This and the associated screens permit one to enter data for a new SED or to change data fields on an existing shipment. Refer to Figure 10. At the top of the toolbar on the left-hand side of the screen is a scroll box containing all sections of the SED. One simply selects the section from this list and edits the section to enter new or correct existing data.

In the top right corner of the screen is the AES*Direct* Assistant, that provides brief instructions and tips on

using AES*Direct*. On this screen the color of the section
title indicates the status of that section: red indicates
that the record is incomplete or an error exists; yellow
indicates a warning; and green indicates the section is
complete and ready to submit. Once all sections are
complete, one can print the SED for reference purposes or
submit it to AES*Direct*.

Figure 10.

Edit Shipment

After retrieving a shipment record and selecting the
section of the SED to work on, such as Shipment Information
as shown in Figure 11, one selects the menu button to Edit
Section. This screen changes from the view to edit screen
and makes the data fields from a previously entered SED or
for a new SED accessible to enter or correct. When the
current section is complete, one selects another section to
enter or returns to the View Shipment screen.

Figure 11

Line Item 1

This section of the system refers to the commodity data of
the SED. The screen (and ones for any additional line
items) operates the same as the Shipment Information
screen. Data can be entered or corrected and then saved by
moving to another section of the SED or the Shipment View
screen.

Figure 12

Error Messages

Once one has completed entering data for the entire SED,
the next step is to select the Submit SED button in the
left menu bar. Actions taken at this time include a final
edit of the data to ensure that no errors are submitted to
the Customs AES system. In the example, shown in
Figure 13, two problems exist that must be resolved before
AES*Direct* submits the SED to Customs.

Figure 13

Reporting Service

The Shipment Reporting Service is a tool that can be
customized to view the status of one's shipment records.
When first used, one can select the types of reports to
display to select from - this becomes a unique report
profile for the user. One can select based upon exporters
and time periods, and may change fields, as the user
desires. Figure 14 is an example of a report showing two
shipment records this week for one exporter.

Figure 14

Summary

AES*Direct* has numerous other functions and screens to
supplement the ones already described. Many of these
provide information or instructions and are self-
explanatory, such as:
- How to Register,
- Terms and Conditions,
- Privacy Policy, and
- News

In addition, the SED application includes other functions to assist the filer for particular needs such as:

- Delete a Shipment from AES,
- Exporter Profile Setup,
- Consignee Profile Maintenance, and
- EDI File Upload

In summary, AES*Direct* has been designed and implemented to provide an easy-to-use, fully functional Internet-based system for exporters, freight forwarders, and others to input, correct, submit, report, save, print, etc. export shipment information. As the international trade, computer technology, or Internet environments change, the Census Bureau is committed to improving and enhancing AES*Direct*. Recent improvements include, adding the option for batch filers to submit data in the Customs Proprietary Format and integrating Web sites with AES*Direct* using AESWebLink.

III.E   AUTOMATED EXPORT SYSTEM (AES): OPERATIONAL CAPACITY:

In order to meet the needs of AES filers, the Office of
Information Technology, U.S. Customs Service, asked the AES
Branch of the Foreign Trade Division, U.S. Census Bureau (Census
Bureau) to provide a chart that depicted the projected capacity
of SED reporting into the AES. The following chart contains
estimated, actual, and projected number of AES records and filers
for years 1996 through 2004. The number of records filed through
the AES is expressed as a percent of total records, excluding
those relating to trade with Canada, filed in any manner.

AES Commodity Record Projections

Year	Estimated	Actual	Percent of Export Trade	Fiscal Year No. of Filers
1996	NA	10,530	NA	NA
1997	NA	72,349	.4%	38
1998	NA	669,026	3.7%	107
1999	4,805,000	2,719,265	12.6%	276
2000	13,643,068	NA	64.2%	700 (est)
2001	15,660,000	NA	72.6%	1000 (est)
2002	20,355,078	NA	85.0%	1025 (est)
2003	24,070,000	NA	95.0%	1050 (est)
2004	25,514,200	NA	95.0%	1100 (est)

A list of AES participants is contained in Appendix E.

III.F   AES*Direct:* OPERATIONAL CAPACITY

The Census Bureau's AES*Direct* Internet-based application was developed to accept a minimum of 100,000 keyed Shipper's Export Declarations for the initial year (October 4, 1999 through October 4, 2000.) The system is able to handle a minimum of 100,000 unique filers.

AES*Direct* is able to transmit batch files, of up to 2,000 SEDs per transmission, into the AES mainframe computer at the U.S. Customs Service.

As participation in the AES*Direct* grows, capacity is expandable in increments to handle a maximum of 500,000 shipper's Export Declaration transactions per month, within 3 years.

Also the AES has the capability to retain and store Shipper's Export Declaration data that have been keyed and transmitted in a secure (password protected) contractor-provided environment for five years from the date of transmission. The following chart reflects information on the number of transmissions submitted through AES*Direct* since its inception.

The chart below shows the number of total registrants, operational registrants, and transmissions submitted through AES*Direct* since its inception. Registrants are all participants who have submitted an electronic application, including those who have not taken and passed the certification test and those who have passed certification, but not submitted any transmissions. This includes those clients who have registered to use the system as a backup to the AES. Operational registrants are those participants actually transmitting export information through AES*Direct.*

AES*Direct* Transmission Data:

Month 1999	Monthly Shipments	Registrants	Operational Registrants
Sep	11	17	2
Oct	624	83	16
Nov	1,740	110	27
Dec	5,993	106	60
99 Total	8,368	317	105

Month 2000	Monthly Shipments	Registrants	Registrants Operational
Jan	34,940	76	37
Feb	36,885	81	36
Mar	41,807	75	19
Apr	54,782	46	47
00 Total	168,414	278	109
TOTAL	176,782	595	214

A list of AES*Direct* participants is contained in Appendix F.

The U.S. Customs Service (Customs) has reviewed the projected growth in AES workload and have concluded that the current Customs mainframe infrastructure can support the projected AES workload volume for Fiscal Years 2000 and 2001. However, Customs also assessed the three main infrastructure components of the AES mainframe; (1)the CPU processing capacity, (2) the direct access storage device capacity, and (3) the telecommunications capacity (both dial-up and dedicated line). This assessment determined that the three infrastructure components, listed above, will require upgrades in FY 2002 to ensure there is sufficient capacity to handle the projected workload volume, of 25,500,000 AES filings, through FY 2004.

"AES*Direct*" currently has the capacity to handle up to 25 percent of the projected FY 2004 AES workload of 25,500,000 AES filings. In addition, the Census Bureau is developing an idle site for AES*Direct* to serve as a backup if the Custom's AES mainframe computer is down for an extended period of time. This second site will have the capability of handling the remaining AES filings. The second site will be operational in the summer of 2000.

With continued enhancements and necessary upgrades to the AES, the Census Bureau and Customs believe the AES and AES*Direct* will be able to handle the projected increase in the volume of AES filings that will result from making the AES mandatory for the filing of all SED information, and from integrating the AES with the automated licensing and export control systems of other Federal government agencies.

IV. SUMMARY OF OTHER COUNTRIES EXPORT DATA COLLECTION SYSTEMS

A U.S. General Accounting Office report entitled "*Automated Export System--Prospects for Improving Data Collection and Enforcement are Uncertain* was sent to the Chairman, Committee on the Judiciary U.S. Senate, in November 1997. The report presented results of a survey of six countries regarding their export procedures and systems for collecting export data. Information was obtained from Australia, Canada, Japan, South Korea, Mexico, and the United Kingdom. Five of the six countries have implemented an automated system to collect their data (Australia, Japan, South Korea, Mexico, and the United Kingdom). Canada is currently piloting an automated system to collect export data. With the exception of Mexico, all countries' automated systems are voluntary (See Appendix G for a complete description of the GAO Survey.)

V. SUMMARY OF AGENCY REPORTS REGARDING MANDATORY AES FILING

Six Federal agencies, participating in the AES feasibility effort, provided their views regarding the feasibility of making the AES mandatory for filing all Shipper's Export Declaration information, and the manner in which data gathered through the AES could be most effectively used or integrated with their export licensing systems. Below is a summary of each agency's comments.

The Department of the Treasury, U.S. Customs Service (Customs) endorses the mandatory filing of SED information over the AES. Customs is required to enforce export control laws for several agencies, including the BXA, the Census Bureau, and the State Department. Making the AES mandatory for all shipper's export declarations will substantially enhance Customs' ability to carry out its export control and enforcement functions. Under current circumstances, with close to 450,000 paper SEDs being filed per month, it is extremely difficult to identify illegal exports to countries or end-users developing weapons of mass destruction, to identify stolen vehicles, and to prevent the illegal transfer of critical technology. With the more timely and accurate information provided by the AES, Customs should be in a better position to target objectionable shipments.

The Department of the Treasury, Office of Foreign Assets Control (OFAC), Enforcement Division, adopted the position stated in the Department of the Treasury, U.S. Customs Service report. The Enforcement Division of OFAC believes that access to AES information would be beneficial during investigations of possible

OFAC violations. Knowledge of the type and extent of U.S. goods that were exported to a target country, as well as the identity of previous exporters, would assist OFAC in developing enforcement strategies, identifying possible front companies and diversion routes as new sanctions programs are implemented.

The Department of Commerce, U.S. Census Bureau (Census), believes making the AES mandatory for filing all export information will significantly improve the quality, timeliness, and coverage of export statistics. Currently, one out of every two paper SEDs submitted contains errors or missing data. In addition to the numerous errors contained on paper SEDs, between 3 and 7 percent of the value of exports is not reported, leading to a significant underreporting of export statistics. The AES has demonstrated that, compared with paper filing, the error rate will be reduced substantially and coverage will be improved. Currently, the error rate in export transactions filed through the AES is approximately 3 percent.

The Census Bureau, in collaboration with the Bureau of Economic Analysis, currently releases the monthly *International Trade in Goods and Services* report about 50 days after the close of the reference month. Full mandatory filing of SEDs, through the AES, has the potential of moving forward the release of this report, since 98 percent of import data is available 2 weeks after the close of the reference month. If the export data collection and compilation process could match the timeliness of that of the import data collection and compilation process, the *International Trade in Goods and Services* report could be released 30 days after the close of the reference month.

The Department of Commerce, Bureau of Export Administration (BXA) believes making the AES mandatory for the filing of all SEDs will enhance the U.S. government's ability to enforce U.S. export control laws and regulations and facilitate legitimate trade. The mandatory filing of SEDs would provide a significant amount of export information relevant to export enforcement on a more timely basis than is currently available. SED information reported through the AES would better equip BXA and Customs to do a better job protecting against illegal exports to countries or to end-users involved in developing weapons of mass destruction, activities supporting terrorism, or other prohibited end uses.

In addition, BXA enforcement officers will be able to review AES data to enhance the effectiveness of BXA licenses. Specifically, BXA's enforcement personnel will use AES data to help determine whether exports are made in compliance with the license and other requirements in the Export Administration Regulations. The BXA

is completing two agreements with Customs to allow authorized BXA personnel direct interface with the AES.

The Department of State has no objection to the provision to make the AES mandatory for the filing of SED information required by the Bureau of the Census. The Department of State believes it be advised to make the AES mandatory for filing Shipper's Export Declarations for ITAR controlled transactions. However, additional changes to the AES will be required in order to meet all the regulatory needs of the Department of State. The AES will require modification to electronic endorsement and/or decrementation of all Department of State licenses. Currently, of the five types of State Department licenses, the AES can only decrement the DSP-5, "Application/license for Permanent Export of Unclassified Defense Articles and Related Unclassified Technical Data." Also, the AES will need to be modified to accommodate different validity periods for permanent export licenses, and the AES must be modified to integrate with the Department of State licensing system, which includes both permanent and temporary licenses and special instructions on shipments prior to release on acceptance of the SED.

The Department of Energy (DOE) has legislative responsibility for reviewing export license applications for nuclear dual-use and nuclear related munitions items. To enable DOE to produce more accurate trend analysis and profiles on end-users and countries, as part of its export control functions, DOE has determined that mandatory AES filings of all SEDs would substantially strengthen its ability to fulfill its mission in countering the spread of weapons of mass destruction. AES data would provide the export analysts with the opportunity to see all nuclear related exports, including those commodities that did not require an export license.

The Department of Defense (DoD) fully supports making AES mandatory for all export shipments. DoD believes information contained in the AES would provide them with export data they require to provide Congress a report on the assessment of the cumulative impact of exports of significant categories of technology and technical information to countries and entities of concern. This report is required by the National Authorization Act of 2000. The DoD would be interested in access to AES data and is willing to negotiate appropriate Memorandums of Understanding or Interagency Agreements to facilitate such access.

The Central Intelligence Agency (CIA) directly supports the export licensing processes of the Departments of Commerce and State for dual-use commodities and munitions by providing relevant intelligence information related to interdiction efforts by the U.S. military, law enforcement, and operational intelligence communities. They believe that making filings of SEDs mandatory will result in the CIA having additional information that will allow greater in-depth analysis of trends in technology transfers and their impact on weapons of mass destruction programs in countries with which we have proliferation concerns. Having access to SED information in a more timely manner would make the analysis and reporting with regard to weapons of mass destruction, more focused, accurate, and timely for the agency's customers.

The consensus of all the agencies consulted by the U.S. Census Bureau, Department of Commerce indicates that making the AES mandatory for filing all SED information would have a positive impact on improving the Federal government's ability to control the export of weapons of mass destruction and critical technologies, would generate data allowing for more sophisticated monitoring of exports that might be used for illegal or destructive purposes, and would also produce more accurate trade statistics.

VI. RECOMMENDATIONS

A. Mandatory AES Filing of All SEDs

It is recommended that the AES be made mandatory for filing all SED information. All of the participating agencies consulted regarding mandatory filing of all SEDs through the AES felt that it would enhance the U.S. government's ability to enforce U.S. export control laws and regulations, facilitate legitimate trade, and improve export trade information.

B. Proposed Integration of AES with Other Agencies

Currently, both the **Census Bureau and the Customs Service** have full access to the data collected through AES or AES*Direct*. The benefits of making AES filing mandatory presupposes that the AES data system can be integrated with the data systems of the agencies with export control or monitoring responsibilities.

While the **Bureau of Export Administration (BXA)** will need access to all SED data fields collected through the AES, BXA will not need information or data beyond that already reported on the SED. BXA will require a direct interface with the AES, that allows real time interactive access. Currently, BXA receives SED information for the purposes of enforcing the Export Administration Regulations (EAR) and the Export Administration Act (EAA) pursuant to an August 17, 1999, National Interest Determination signed by the Director of the Census Bureau. Also, BXA is currently working with the Customs Service to complete a Memorandum of Understanding (MOU) and an Interconnection Security Agreement for a direct interface with the U.S. Customs Service (Customs) data center.

The **Department of State** will require full access to the AES. Some additional changes will be required that would allow Customs to meet all the needs of the State Department, such as to endorse or decrement all State Department licenses, and to differentiate between SED information filed for permanent exports and SED information filed for temporary exports.

In addition, an information sharing arrangement must be established between the Census Bureau, Customs, and the State Department, to allow the State Department access to information on ITAR-controlled exports made through the U.S. Postal Service. Also, a quantity field and commodity descriptions must be added to the AES record to parallel information currently collected by the State Department.

The **Department of Energy (DOE)** will need access to most of the data elements in the AES. In order to provide this information, the Director of the Census Bureau must make a National Interest Determination to release the information to the DOE. Also the DOE must work with Customs and the Census Bureau to develop and implement several Memorandums of Understanding (MOUs) to allow access between the two agencies. DOE's preferred method of accessing the AES data files would be through an electronic data exchange format, approved for secure transmittal, between the DOE and Customs.

The **Department of Defense (DoD)** will require access to most of the information contained on the SED. Initial analysis suggests that DoD has statutory authority to receive certain export information. The DoD will need to develop and implement a Memorandum of Understanding with the Census Bureau and Customs to obtain access to the required AES information. The DoD would prefer a full electronic data interchange (EDI) between the DoD and Customs. The EDI format is one of several formats in which the AES data is currently collected.

The **Central Intelligence Agency (CIA)** would prefer to have access to the AES data via a dial up capability for direct line access to the data files. The CIA also will need to work with the Census Bureau and Customs to develop and implement a Memorandum of Understanding to obtain access to the SED information.

It appears that all of the export control agencies involved in the AES feasibility process have statutory and regulatory authority to receive access to some or all the SED or AES information. On the assumption that the agencies with export control or monitoring functions can satisfactorily fulfill their responsibilities with the SED information they are now entitled to receive, there does not seem to be any need to change current laws or regulations to permit the sharing of SED information collected through the AES. Moreover, the interagency MOUs, described in the preceding paragraphs, codifying data transfer, will only provide the agencies access to the export data they are currently authorized to access based on their statutory and regulatory authority. **[**The MOUs will primarily cover the specific type of data that is being released, the use of the data, restrictions on the use of the data, confidentiality and security of the data, and secondary disclosure of the data.**]** Should agencies require more information from the AES than they are now entitled to receive under current law or regulation, Congress will have to enact expansion of such access, a process ensuring appropriate legislative and public debate of these changes to the confidentiality of the data collected through the AES.

C. Proposed Timetable for Implementing Mandatory Electronic Filing of Shipper's Export Information (SED) through the Automated Export System (AES)

The U.S. Customs Service and the Census Bureau, as the primary developers of the AES, recommend that the full implementation of mandatory filing of all SED information, and the integration of the AES with other Federal government agency licensing systems be initiated in four stages as described below:

Stage 1 - Require mandatory filing through the AES only for exports of items on the U.S. Munitions List and the Commerce Control List 90 days after the law becomes effective. The law becomes effective 270 days after AES is certified as a secure, functional system. (Fiscal Year 2001)

Stage 2 - Require mandatory filing through the AES for the remainder of exports requiring an export license. (Fiscal Year 2002)

Stage 3 - Require mandatory filing through the AES for all freight forwarders, nonvessel operating carriers, consolidators, and other intermediaries, that file commodity documentation on behalf of exporters. (Fiscal Year 2003)

Stage 4 - Require mandatory filing through the AES for all exporters, including companies, individuals, and other exporting entities that file commodity documentation. (Fiscal Year 2005)

This proposed schedule recognizes the urgency of improving the surveillance of exports on the U.S. Munitions List and the Commerce Control List, takes into consideration the time required to integrate the information systems among all the potential government users of the AES data, and acknowledges the fact that mandatory filing of SEDs over the AES will represent a significant change in business practice for many exporters, especially smaller ones.

D. Cost of Implementing AES Mandatory Filing

1. U.S. Census Bureau Funding Requirements—AES

Implementation of the Proliferation Prevention Enhancement Act of 1999 will require a significant increase in funding to ensure that the Census Bureau can meet the expanded requirements.

Background - For Fiscal Year 2001, the Census Bureau has requested $1.4 million for an Export Coverage Improvement Initiative plus restoration of another $1.4 million in base funding, eliminated in prior budget cycles, for the foreign trade statistics program. The Export Coverage Improvement Initiative would commence a program to remedy the current under-valuation of exports, now estimated at 3 to 7 percent of the total value of exports. The restoration would simply get operational funding for the statistics program back to prior levels. Neither of these requests was designed to cover the costs of the responsibilities that the Census Bureau would assume under the Proliferation Prevention Enhancement Act.

Projecting costs for FY 2001 for implementation of the mandatory AES reporting system is complicated by the uncertainty of the extent to which the program might be in operation for the year. On the assumption that planning, system design, and infrastructure work could commence in FY 2001, the Census Bureau projects that obligations could reach $4.7 million for the year. This projected obligation is $1.9 million above the $2.8 million

already requested for fiscal year 2001. The $1.9 million would
be used to implement Stage 1 – mandatory filing through the AES
for exports of items on the United States Munitions List and the
Commerce Control List.

For FY 2002-2005, the Census Bureau will need $6.7 million to
totally support the implementation of full mandatory reporting of
SED information through the AES. The chart below identifies the
full funding requirements of the Census Bureau to support AES and
the collateral additional requirements of the Proliferation
Prevention Enhancement Act of 1999.

Census Bureau Funding Requirements for AES

PURPOSE	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
Operational Support	$2,600,000	$3,400,000	$3,400,000	$3,400,000	$3,400,000
Computer Programming	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
AES Internet Application	$600,000	$600,000	$600,000	$600,000	$600,000
Outreach, Education & Training	$500,000	$1,250,000	$1,250,000	$1,250,000	$1,250,000
Interagency Support BXA, State, DOD, etc.	$0	$500,000	$500,000	$500,000	$500,000
Total Spending	$4,700,000	$6,750,000	$6,750,000	$6,750,000	$6,750,000

2. U.S. Customs Service Funding Requirements - AES

The U.S. Customs Service (Customs), has received no
appropriations for the AES since its creation. This includes the
budget request for FY 2001. Additionally, the Custom's funding
requests for this year, FY 2000, only covered current staffing
levels. The proposed requirements imposed by the Proliferation
Prevention Enhancement Act would also require additional funding
for staffing from both a programming and operational standpoint.

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Annual Customs Budget Estimates for AES FY 2001 - 2005:

1. Maintenance of existing system with volume increases; no
    enhancements:

$ 5,500,000	Technical services for production support and maintenance changes
$ 800,000	Software testing
$ 200,000	Prorated travel, supplies, training, equipment and licenses
$ 300,000	Infrastructure upgrades
$ 6,800,000	Total maintenance

2. Enhancements to increase functionality related to current
    proposed modules (Air, NVOCCs, drawback, in-bond,
    improvements for inspectors and agents, and other agency
    interfaces required by the legislation.

$ 2,500,000	Technical services for analysis, design and coding of enhancements
$ 800,000	Software testing
$ 100,000	Prorated travel, supplies, training, equipment and licenses
$ 300,000	Infrastructure upgrades
$ 3,700,000	Total Enhancements

3. Office of Information Technology (OIT):

$ 1,807,000	Full year funding for 5 government programmers and 10 additional client representatives

4. Operational Support:

$ 2,151,000	Full year funding for 20 new AES coordinators at major ports
$ 5,219,000	Full year funding for 50 new Outbound Inspectors
$ 9,177,000	

5. **Totals**:

$ 9,900,000	AES maintenance and new development
$ 600,000	Infrastructure upgrades to support volume growth
$ 9,177,000	FTE
$19,677,000	

Assumptions:

(1) The projected dollar amounts, in item 1, are based on the fact that 70 percent of technical support is maintenance; 30 percent is enhancements. Testing was estimated at 50-50 percent since the complexity and size of each project is not known at this time. Infrastructure upgrades are also split 50-50 percent because a certain level of volume increase can be expected each year whether the AES is mandatory or not.

(2) Volume projections from the Census Bureau increase by 5 million transactions each year through 2004, when we expect to achieve 95 percent participation or 25.5 million transactions annually.

(3) The estimate in item 4, assumes that interfaces with other agencies will not be done until Stage 4.

(4) An infrastructure upgrade estimate in item 5 is included each year to support the annual volume growth. The figure ($600,000) is based on the amount requested by the Office of Information Technology (OIT) for the 2001 upgrade.

It should be noted that approximately half of the costs identified by Customs cover expanded use of the AES information, such as more targeted inspection of export shipments. That is, there is little to gain by creating a totally automated export information system unless agencies with export control and examination responsibilities actually put the more timely and more informative AES data to use. That is part of the intent underlying the Customs Service cost estimate.